FINAL ENGINEERING REPORT
FORMER PRESTO PLASTICS (OU-2)
KINGS PLAZA SHOPPING CENTER
BROOKLYN, NEW YORK

PURSUANT TO NYSDEC VOLUNTARY
CLEANUP AGREEMENT
DATED FEBRUARY 26, 2001
NYSDEC VCA No. A2-0403-9911

TECHNICAL REPORT
AND
APPENDICES A THROUGH E

APRIL 2008

PREPARED FOR:

VORNADO REALTY TRUST
PARAMUS, NEW JERSEY

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CERTIFICATIONS

I, Eric J. Raes, am currently a registered professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program for the Former Presto Plastics (OU-2) Site at the Kings Plaza Shopping Center, Brooklyn, New York (NYSDEC VCA Index No. A2-0403-9911).

I certify that the Site description presented in this FER is identical to the Site descriptions presented in the Environmental Easement, the Site Management Plan, and the Voluntary Cleanup Agreement for Former Presto Plastics (OU-2) and related amendments.

I certify that the Remedial Action Work Plan dated May 2005 and approved by the NYSDEC on August 15, 2005 were implemented and that all requirements in those documents have been substantively complied with.

I certify that the remedial activities were observed by qualified environmental professionals under my supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and all operation and maintenance requirements applicable to the Site are contained in an Environmental Easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, will be notified that such Easement has been recorded within 30 days of the date of the NYSDEC letter approving of the FER. A Site Management Plan has been submitted by the Applicant for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by NYSDEC.

I certify that all export of contaminated soil, fill, water or other material from the property was performed in accordance with the Remedial Action Work Plan, and were taken to facilities licensed to accept this material in full compliance with all Federal, State and local laws.

I certify that all import of soils from off-Site, including source approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan.

I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology and soil screening methodology defined in the Remedial Action Work Plan.

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

074976	March 31, 2008	
NYS Professional Engineer #	Date	Signature

It is a violation of Article 130 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 130, New York State Education Law.

FINAL REMEDIAL ENGINEERING REPORT

1.0 BACKGROUND

Alexander's Kings Plaza Center, Inc. (Alexander's) entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC) on February 26, 2001 to investigate and remediate a portion of the 31 acre property located in Brooklyn, Kings County, New York. The Site use will remain Restricted Commercial. The area identified as Operable Unit (OU)-2 is comprised of approximately 0.29 acres currently owned by Alexander's, a majority-owned subsidiary to Vornado Realty Trust (Vornado).

This VCA required the Volunteer to investigate and remediate soil and groundwater quality associated with documented Historic Fill within the area defined as OU-2. A map of the Site location is shown in Figure 1. A generalized site plan showing the property boundaries and the area defined as OU-2 (herein referred to as the subject property or Site) is shown in Figure 2.

A digital copy of this Final Engineering Report (FER) with all project documents is included in Appendix A.

1.1 Site Location and Description

The portion of the Former Presto Plastics Area that is identified as OU-2 is comprised of approximately 0.29-acres located at the northern end of the 55th Street access road to the Kings Plaza Shopping Center as shown on Figure 2. The Kings Plaza Shopping Center is a ±31-acre parcel identified on the Kings County tax maps as Section 1, Block 847, Lots 50 and 55. Figure 1 shows the location of the Site on the Coney Island, N.Y. United States Geological Survey (USGS) 7.5 Minute Series topographic map. The Site is bounded by Avenue U to the north, the Kings Plaza Shopping Center to the west, a paved parking area that is part of the Kings Plaza property (OU-3) to the east, and the 55th Street access road and OU-1 to the south. As shown on Figure 1, the closest surface water body is the Mill Basin located immediately adjacent to the southern side of the Kings Plaza Shopping Center. The 0.29-acre area designated as OU-2 is fully described in Appendix B – Metes and Bounds.

1.2 Contemplated Redevelopment Plan

The Remedial Action which includes the implementation of Engineering Controls and Institutional Controls has made the Site protective of human health and the environment to standards consistent with the contemplated end use. The end use of the subject property will remain as an access road and sidewalk for the adjacent shopping mall. A site plan showing the current use of the property is provided as Figure 2.

1.3 Description of Surrounding Property

The area immediately surrounding the subject property includes the Kings Plaza Shopping Center, roadways, sidewalks, and parking areas. Retail businesses and multi-family residential structures occur across Avenue U to the north as well as to the east of the subject property beyond OU-3. The Kings Plaza Shopping Center is immediately adjacent to OU-2. There are no schools, day care facilities, hospitals, or wetlands in the immediate vicinity of OU-2 area.

As shown on Figure 1, the Mill Basin is located immediately adjacent to the southern side of the Kings Plaza Shopping Center which is approximately 450 feet southeast of OU-2. No other sensitive receptors are located in the vicinity of OU-2.

2.0 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

The Site was investigated in accordance with the scope of work outlined in the November 2003 Remedial Investigation Report Addendum (RIRA) prepared by Excel Environmental Resources, Inc. (Excel). A Remedial Action Workplan dated May 2005 was subsequently submitted and approved by the NYSDEC on February 15, 2005.

2.1 Summary of Remedial Investigations Performed

The following reports document the findings of several environmental site assessments, previous environmental investigations conducted in OU-1, and investigations conducted at OU-2:

- Phase I Environmental Site Assessment (ESA) of Kings Plaza Shopping Mall, Flatbush Avenue and Avenue U, Brooklyn, New York, prepared by Certified Engineering and Testing Company, Inc. on behalf of Alexander's, dated October 4, 1993;
- Contaminant Assessment (CA)/Site Investigation (SI), prepared by IVI on behalf of Rosenman & Colin, LLP, dated July 1997;
- Groundwater Monitoring Report Nos. 1 through 17, prepared by IVI on behalf of Vornado;
- Remedial Investigation Report (RIR)/Remedial Action Workplan (RAW) for the Former Presto Plastics Facility, Operable Unit No. 2, prepared by IVI, dated April 19, 2000;
- Remedial Investigation Report/Remedial Action Workplan (RIR/RAW) for the Former Presto Plastics Facility, Operable Unit No. 2, prepared by IVI, dated August 15, 2001; and
- Progress Report Nos. 18 through 25, prepared by Excel on behalf of Vornado.
- Remedial Investigation Report Addendum, prepared by Excel on behalf of Vornado, dated November 2003.
- Remedial Action Workplan, prepared by Excel on behalf of Vornado, dated May 2005.

The August 2001 RIR/RAW summarizes the results of investigation of OU-2 soil and groundwater quality conducted by IVI from June 1999 through September 1999. Review of the August 2001 RIR/RAW indicates that five soil borings (designated B-1 through B-3, B-12, and B-19) were advanced in the immediate vicinity of OU-2 as shown on Figure 3. Analytical results of soil samples collected at depths between six to eight feet below ground surface (bgs) indicated that there were no Volatile Organic Compounds (VOCs) detected at concentrations above the NYSDEC Track 2 Soil Cleanup Objectives (SCO) in any of these five soil borings. The Semi-Volatile Organic Compound (SVOC) results indicated that several Base Neutral organic compounds (BNs) were reported in soil boring B-19 at concentrations above the NYSDEC Track 2

SCO. There were no elevated BN concentrations reported in samples collected from the other four soil borings.

As outlined in the November 2003 RIRA, review of the boring logs prepared by IVI for monitoring wells and soil borings advanced in the 55th Street access road during the RI indicate that fill material consisting of brown to gray, medium to coarse sand with wood, bricks, cinders, glass, cobbles, and shells is laterally extensive within 55th Street from the OU-2 Area at the northern end of the street to the south near the Mill Basin.

As part of the RI, IVI also collected groundwater samples from monitoring wells MW-4, MW-33, and MW-34 within the OU-2 Area. Analytical results indicated that Naphthalene and several BN compounds were reported at concentrations above the New York Groundwater Quality Criteria (NYGWQC). As documented in the November 2003 RIRA, the historic groundwater analytical results for the OU-2 monitoring wells, indicate that BNs are predominantly the only parameters historically reported in groundwater at OU-2 wells MW-4 and MW-33. Historic groundwater analytical results for VOCs and SVOCs are summarized in Tables 1 and 2, respectively.

Based on the elevated BN concentrations in soil and the composition of the fill, the fill meets the NYSDEC definition of contaminated Historic Fill (defined as non-native fill that was contaminated prior to emplacement; usually due to the presence of ash and cinders which can contribute BNs, metals, and other contaminants to the fill). Furthermore, the historic OU-2 groundwater analytical results were likely biased high due to elevated turbidity in the samples and the fact that NYSDEC-recommended low flow sampling techniques were not used.

In order to complete groundwater quality delineation and to confirm the most appropriate remedial action alternative, Excel conducted a focused soil and groundwater RI in OU-2 in late 2002 and 2003 to verify whether elevated BN concentrations historically reported in soil and groundwater in OU-2 are in fact attributed to Historic Fill.

A summary of the June 2003 soil analytical results is provided in Table 3 and Figure 4. As shown, the following BNs were reported at elevated concentrations above the NYSDEC Track 2 SCO:

- Benzo(a)anthracene (maximum concentration of 33 mg/kg);
- Chrysene (maximum concentration of 34 mg/kg);
- Benzo(b)fluoranthene (maximum concentration of 26 mg/kg);
- Benzo(k)fluoranthene (maximum concentration of 29 mg/kg);
- Benzo(a)pyrene (maximum concentration of 32 mg/kg);
- Indeno(1,2,3-cd)pyrene (maximum concentration of 21 mg/kg); and
- Dibenz (a,h) anthracene (maximum concentration of 6.2 mg/kg).

Based on the focused RI findings, the BN concentrations in soil at levels above the NYSDEC Track 2 SCO are attributable to the Historic Fill and are not reflective of a historic point source discharge from site operations as previously indicated by IVI. Since the Historic Fill is laterally extensive and treatment and/or removal of the Historic Fill is technically and economically unfeasible, remedial action in the form of EC with IC to address the contaminated Historic Fill for compliance with the requirements of the Technical Guidance is proposed for OU-2.

As also summarized in the November 2003 RIRA, the groundwater analytical data generated during two rounds of groundwater sampling and analysis using NYSDEC-recommended low flow sampling techniques indicated that only BNs were reported in groundwater at OU-2 at concentrations slightly above the NYGWQC. This data support the conclusion that the trace BN concentrations are associated with the Historic Fill and not a historic point source discharge therefore, no further action for groundwater in OU-2 is required.

Groundwater analytical results are summarized in Tables 4 and 5 and shown on Figure 5. The following BNs were reported in groundwater at concentrations above the NYSDEC Groundwater Quality Criteria during the most recent round of groundwater sampling conducted in July/August 2003:

- Naphthalene at 21 ug/L at monitoring well location MW-33;
- Acenaphthalene (maximum concentration of 44 ug/L at MW-33);
- Benzo(a)anthracene at 3.6 ug/L at monitoring well location MW-4;
- Chrysene at 5.3 ug/L at monitoring well location MW-4;
- Benzo(b)fluoranthene at 4.5 ug/L at monitoring well location MW-4;
- Benzo(k)fluoranthene at 5 ug/L at monitoring well location MW-4;
- Benzo(a)pyrene at 4.9 ug/L at monitoring well location MW-4; and
- Indeno(1,2,3-cd)pyrene at 3.3 ug/L at monitoring well location MW-4.

2.2 Site-Specific Geology and Hydrogeology

The following summarizes key aspects of the site-specific geology and hydrogeology based on review of the previous environmental reports and review of soil boring logs prepared by others and Excel for the Site. Soil boring logs for the Site are provided in Appendix C.

- The overburden soil across the Site consists predominantly of coarse to fine-grained sandy fill material to a depth of approximately three to 10 feet bgs. With depth, the fill is increasingly fine-grained with higher amounts of silt;

- The fill composition is heterogeneous and contains varying amounts of wood, brick, ash and cinders, coal, glass, cobbles, shells, and other miscellaneous materials;

- Underlying the fill and silty sand is a silty, organic clay stratum that appears to be native estuarine sediments deposited prior to the initial development of the property;

- As detailed in a previous RIRA and RAW prepared by Excel in July 2003 for OU-3, the clay is laterally continuous across the Site and, consistent with an estuarine depositional environment, increases in thickness from north to south towards the Mill Basin;

- Shallow groundwater occurs under unconfined water table conditions at approximately five to seven feet below ground surface in the upper sandy fill material and the groundwater flow direction is generally towards the south and southeast across the Site although there are areas of localized mounding. In the vicinity of the OU-2 Area, the primary groundwater flow direction is apparently toward the south and southwest. As detailed in the November 2003 RIRA, data provided by the installation of additional monitoring wells in this area also indicates a component of flow toward the northwest;

- The organic clay is underlain by alternating sand and silt deposits. The data indicate that groundwater occurs within this lower formation under confined conditions; and
- The data indicate that the underlying organic clay strata effectively serve as a confining unit and that the underlying sand and silt formation is hydraulically isolated from the shallow water- bearing zone.

2.3 Contamination Conditions

Based on the results of investigations conducted by IVI from June 1999 through September 1999 (as documented in the August 2001 RIR/RAW) and investigations conducted by Excel in 2002 and 2003 (as documented in the November 2003 RIRA), soil quality within the OU-2 area contains BNs at concentrations above the NYSDEC Track 2 SCO.

A summary of the June 2003 soil analytical results is provided in Table 3 and Figure 4. As shown, the following BNs were reported at elevated concentrations above the Track 2 SCO:

- Benzo(a)anthracene (maximum concentration of 33 mg/kg);
- Chrysene (maximum concentration of 34 mg/kg);
- Benzo(b)fluoranthene (maximum concentration of 26 mg/kg);
- Benzo(k)fluoranthene (maximum concentration of 29 mg/kg);
- Benzo(a)pyrene (maximum concentration of 32 mg/kg);
- Indeno(1,2,3-cd)pyrene (maximum concentration of 21 mg/kg); and
- Dibenz (a,h) anthracene (maximum concentration of 6.2 mg/kg).

Based on the focused RI findings, the BN concentrations in soil at levels above the NYSDEC soil cleanup criteria are attributable to the Historic Fill and are not reflective of a historic point source discharge from site operations as previously indicated by IVI. Since the Historic Fill is laterally extensive and treatment and/or removal of the Historic Fill is technically and economically unfeasible, remedial action in the form of EC with IC to address the contaminated Historic Fill for compliance with the requirements of the Technical Guidance is proposed for OU-2.

The results of the environmental investigations conducted by IVI and Excel indicate that only BNs were reported in groundwater at OU-2 at concentrations slightly above the NYGWQC. This data support the conclusion that the trace BN concentrations are associated with the Historic Fill and not a historic point source discharge therefore, no further action for groundwater in OU-2 is required.

Groundwater analytical results are summarized in Tables 4 and 5 and shown on Figure 5. The following BNs were reported in groundwater at concentrations above the NYSDEC Groundwater Quality Criteria during the most recent round of groundwater sampling conducted in July/August 2003:

- Naphthalene at 21 ug/L at monitoring well location MW-33;
- Acenaphthalene (maximum concentration of 44 ug/L at MW-33);
- Benzo(a)anthracene at 3.6 ug/L at monitoring well location MW-4;
- Chrysene at 5.3 ug/L at monitoring well location MW-4;

- Benzo(b)fluoranthene at 4.5 ug/L at monitoring well location MW-4;
- Benzo(k)fluoranthene at 5 ug/L at monitoring well location MW-4;
- Benzo(a)pyrene at 4.9 ug/L at monitoring well location MW-4; and
- Indeno(1,2,3-cd)pyrene at 3.3 ug/L at monitoring well location MW-4.

The target Standards, Criteria, and Guidance (SCGs) for soil in OU-2 are the parameter-specific NYSDEC Track 2 Restricted Use SCO. A summary of the soil analytical data provided in comparison to the Track 2 SCO is provided as Table 3. The target SCGs for groundwater in OU-2 are the parameter-specific NYSDEC Groundwater Quality Standards. A summary of the groundwater analytical data compared to the Groundwater quality Standards is provided as Tables 4 and 5.

2.4 Environmental and Public Health Assessments

2.4.1 Qualitative Human Health Exposure Assessment

A Qualitative Human Health Exposure Assessment consists of characterizing the potential exposure setting, identifying and evaluating potential exposure pathways, and evaluating contaminant fate and transport. To conduct such an assessment, site conditions are characterized to evaluate whether or not a site poses an existing or potential hazard to the exposed or potentially exposed population. Site characterization involves a review of soil and groundwater data and an evaluation of the physical conditions of the contaminant sources or any physical hazards that may pose an additional health risk to the community.

As detailed in Section 2.5, the environmental data indicates that the subsurface soil and shallow groundwater quality has been impacted by BNs within Historic Fill that serve as the source of the contamination. As shown in Figure 2, the entire area of OU-2 is covered by an asphalt-paved roadway and concrete sidewalks.

Since it is well documented that the impacted soil and groundwater occurs beneath the existing asphalt pavement and concrete, there is neither direct contact potential nor ingestion or inhalation hazard under the existing site conditions. In addition, the shallow groundwater is not used for any purpose therefore there is no direct contact, ingestion, or inhalation hazard associated with the groundwater under current site conditions.

In addition to site characterization or exposure setting, the Qualitative Exposure Assessment includes identification and evaluation of potential exposure pathways. An exposure pathway has five different elements and describes the means by which an individual may be exposed to contaminants originating from a site. Each of the five elements along with a brief description documenting each element in the context of the OU-2 Site is summarized as follows:

- **A Contaminant Source:** The contaminant source is the Historic Fill that was placed to raise grade at the Site prior to development of the property.

- **Contaminant Release and Transport Mechanisms:** Under existing site conditions, there are no potential mechanisms by which contaminants may be carried from the source

areas to points where human exposure may occur since the existing asphalt pavement and concrete prevent direct contact with soil and groundwater.

- **A Point of Exposure:** An exposure point is a location where actual or potential human contact with a contaminated medium may occur. As outlined above, the potential for human contact with impacted subsurface soil and groundwater is negligible under existing site conditions.

- **A Route of Exposure:** The exposure route is the manner in which a contaminant actually enters or contacts the body, including dermal absorption via direct contact, ingestion, or inhalation. As outlined above, the potential for human contact with impacted subsurface soil and groundwater is negligible under existing site conditions.

- **A Receptor Population:** The receptor population is the people who are or may be exposed to contaminants at the point of exposure. As outlined above, the potential for human contact with impacted subsurface soil and groundwater is negligible under existing site conditions.

Based on evaluation of the five potential exposure pathways, the potential for an exposure pathway to exist under the current site conditions is negligible therefore there is no indication that any additional evaluation is warranted.

The remedial action for the Site includes establishment of Engineering Controls under an Environmental Easement as outlined in the May 2005 RAW.

2.4.2 Fish & Wildlife Remedial Impact Analysis

In accordance with Section 3.10 of the NYSDEC Technical Guidance, the Fish and Wildlife Resources Impact Analysis (FWRIA) is a two Part process that begins with the evaluation of whether or not a FWRIA resource characterization is warranted. The objective of the FWRIA resource characterization is to identify actual or potential impacts to fish and wildlife resources from site contaminants of ecological concern. To determine if a FWRIA is needed for this Site, the FWRIA Decision Key provided in Appendix 3C of the Technical Guidance is completed. Based on application of the Decision Key to the OU-2 Site, the data support the conclusion that a FWRIA is not needed.

The extensive site characterization data for OU-2 therefore support the conclusion that a FWRIA resource characterization is not warranted. In accordance with Section 3.10.2 of the Technical Guidance, since the FWRIA resource characterization is not warranted, an ecological impact assessment is not warranted.

2.5 Interim Remedial Action

There was no Interim Remedial Action (IRM) conducted for the OU-2 site.

2.6 Remedial Action Objectives

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) for OU-2 have been identified for this Site:

Soil

Ensure that the contaminant concentrations in soil are protective for the proposed use of OU-2 as an asphalt-paved roadway and sidewalk for the adjacent Kings Plaza Shopping Center; and

Minimize the potential for ingestion, direct contact, or inhalation of BN concentrations that exceed soil cleanup objectives and drinking water standards.

Groundwater

Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standard; and

Prevent contact with contaminated groundwater.

3.0 DESCRIPTION OF APPROVED REMEDIAL ACTION PLAN

The Site was remediated in accordance with the scope of work presented in the NYSDEC-approved RAW dated May 2005.

The selected remedial action alternative for OU-2 was the establishment of Institutional Controls in the form of an Environmental Easement and Engineering Controls in the form of the existing asphalt paved roadway and concrete sidewalks to restrict direct contact with the underlying soil and groundwater. A thorough evaluation of remedial action alternatives for the contaminated Historic Fill within OU-2 was conducted prior to selection and design of the remedial action as follows:

3.1 Overall Protection of Public Health and the Environment

a. The selected remedy will enable the Volunteer to achieve the project-specific RAO's through the elimination, reduction, and/or control of actual or potential risks posed by the impacted soil and shallow groundwater through restricting direct contact.

b. The Engineering Controls established for OU-2 are already in place and in good condition therefore no potential risk of exposure to the impacted soil or shallow groundwater is associated with construction of the Engineering Controls.

c. The Environmental Easement will ensure that the Engineering Controls remain protective of human health and the environment by controlling disturbances, alterations, improvements, and/or modifications to the Engineering Controls thereby limiting human exposure to the contaminants of concern that remain in the soil.

d. Health and Safety and engineering measures will be taken during implementation of any construction activities within the Engineering Controls and Environmental Easement boundaries as further discussed in the Post-Remediation Management Plan provided in Chapter 5.0 of the May 2005 RAW.

3.2 Compliance with Standards, Criteria, and Guidance (SCGs)

a. The selected remedy is designed to restrict direct contact with contaminated Historic Fill that contains BN concentrations above the NYSDEC soil cleanup criteria.

b. Establishment of an Environmental Easement and Engineering Controls is an acceptable remedial action alternative in accordance with the NYSDEC Technical Guidance and is fully protective of human health and the environment under the conditions at the Site.

3.3 Long-Term Effectiveness and Permanence

a. The selected remedy will be effective over the long-term because the Environmental Easement and Engineering Controls are designed to restrict direct contact of soil. The Environmental Easement will include requirements for maintenance and annual inspection of the Engineering Controls to ensure that it remains protective of human health and the environment.

b. The Environmental Easement will also include requirements to control disturbances, alterations, improvements, and/or modifications to the Engineering Controls that may be necessary in the future due to maintenance and/or improvements at the Site.

3.4 Reduction of Toxicity, Mobility or Volume

a. The selected remedy will restrict direct contact with the BNs and remain protective of human health and the environment.

b. The Engineering Controls will minimize the infiltration of rainwater through the unsaturated soil thus minimizing the potential for leaching of BNs to the shallow groundwater. The low solubility characteristics of the BNs also minimize the potential for transport of these contaminants.

3.5 Short-Term Effectiveness

a. Engineering Controls in OU-2 currently exist in the form of a portion of the asphalt-paved 55th Street access road and adjacent concrete sidewalk therefore no further construction or engineering measures are required.

b. As discussed in the Post-Remediation Management Plan provided as Chapter 5.0 of the May 2005 RAW, Health and Safety and engineering measures will be required during any future disturbances, alterations, improvements, and/or modifications to the Engineering Controls.

c. There is currently no direct contact possible with soil and shallow groundwater in OU-2 due to the existence of the asphalt-paved 55th Street access road and adjacent concrete sidewalk.

d. In addition, the Environmental Easement will include requirements to control future disturbances, alterations, improvements, and/or modifications to the Engineering Controls.

3.6 Implementability

a. Implementation of the selected remedy is technically and administratively feasible since the Engineering Controls in the form of a portion of the asphalt-paved 55th Street access road and concrete sidewalk currently exist thus direct contact with the underlying soil and shallow groundwater is already restricted under the existing Site conditions.

The following remedial action SCGs are applied to the approved remedial action:

- 6 NYCRR Part 375-6 Soil Cleanup Objectives – The NYSDEC Track 2 Restricted Use SCO are used for the Site and the selected remedy is designed to restrict direct contact with contaminated soil that contains BN concentrations above the NYSDEC Track 2 SCO.

- New York State Groundwater Quality Standards – 6 NYCRR Part 703 – The selected remedy is designed to prevent ingestion and direct contact with groundwater containing residual concentrations above the NYS Groundwater Quality Standards.

- NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation - December 2002 (or later version if available);

- NYSDEC Draft Brownfield Cleanup Program Guide – May 2004; and

- New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan.

3.7 Summary of Proposed Remedial Action

The remedial action selected for the Site includes establishment of Engineering Controls under an Environmental Easement as outlined in the November 2003 RIRA and May 2005 RAW.

Residual contamination associated with Historic Fill occurs within the Former Presto Plastics Area designated as OU-2. The elevated BN concentrations and the composition of the fill meet the NYSDEC definition of contaminated Historic Fill. The contaminants reported above NYSDEC Track 2 SCO in Historic Fill within the area defined as OU-2 include the following compounds:

- Benzo(a)anthracene;
- Chrysene;
- Benzo(b)fluoranthene;
- Benzo(k)fluoranthene;
- Benzo(a)pyrene;
- Indeno(1,2,3-cd)pyrene; and
- Dibenz (a,h) anthracene.

Based on these data, EC, as well as IC in the form of an Environmental Easement are warranted.

It is Vornado's intention to utilize the existing asphalt-paved roadway and concrete sidewalks adjacent to 55th Street as "engineered caps" to minimize any future direct contact with residually contaminated soil as well as to minimize rainwater infiltration through the soil column.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

No active remediation was conducted at the subject property. Remedial action at the Site includes the use of Engineering Controls and Institutional Controls to protect public health and the environment in the future. The Controlled Property has two primary Engineering Controls which include the following:

- Existing asphalt pavement of the 55th Street roadway; and
- Concrete sidewalks adjacent to 55th Street.

4.1 Governing Documents

The May 2005 RAW outlines the remedial action to address the elevated BN concentrations in soil and groundwater that are attributed to contaminated Historic Fill within the area defined as OU-2.

4.2 Remedial Program Elements

No active remediation was conducted within the area designated as OU-2 therefore this section is not applicable.

4.3 Contaminated Materials Removal

There were no contaminated materials removed as part of the remedial action for OU-2.

4.4 Remedial Performance (End Point) Sample Results

This section is not applicable to the remedial action for OU-2.

4.5 Backfill

This section is not applicable to the remedial action for OU-2.

4.6 Residual Contamination Remaining Onsite

The contaminants that remain onsite above the NYSDEC Track 2 SCO include the following compounds:

- Pyrene;
- Benzo(a)anthracene;
- Chrysene;
- Benzo(b)fluoranthene;
- Benzo(k)fluoranthene;
- Benzo(a)pyrene;

- Indeno(1,2,3-cd)pyrene; and
- Dibenz (a,h) anthracene.

Table 3 and Figure 4 summarize results of all soil samples remaining at the Site after completion of Remedial Action in comparison to the Track 2 Restricted Use SCO.

Since residual contaminated soil and groundwater exists beneath the Site, Institutional and Engineering Controls are required to protect human health and the environment. These Engineering and Institutional Controls are described hereafter. Long-term management of these EC/ICs and residual contamination will be performed under a Site Management Plan (SMP) contained in this FER.

4.7 Engineering Controls Systems

Residual contamination is present at this Site and Engineering Controls were implemented to protect public health and the environment in the future. The Engineering Controls include the following composite cover system:

- Existing asphalt pavement of the 55th Street roadway; and
- Concrete sidewalks adjacent to 55th Street.

4.7.1 Composite Cover System

Exposure to residual contaminated soils is prevented by an engineered, composite cover system that has been built on the Site. This composite cover system is comprised of the asphalt covered 55th Street access road and concrete covered sidewalks. Figure 2 shows the location of each cover type at the Site. A Site Management Plan is included in Appendix D of this FER, and outlines the procedures required in the event the composite cover system and underlying residual contamination are disturbed. Issues related to maintenance of this cover are provided in the Monitoring Plan included in Section 3 of the SMP.

4.8 Institutional Controls

A series of Institutional Controls are required under the RAW to implement, maintain and monitor Engineering Control systems and prevent future exposure to residual contamination by controlling disturbances of the subsurface soil. Adherence to these on-Site Institutional Controls is required under the Environmental Easement and will be implemented under the SMP attached to this FER. These Institutional Controls for the Site (Controlled Property) are:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;

- All Engineering Controls must be operated and maintained as specified in the SMP;

- The composite cover system consisting of the asphalt covered 55th Street access road and concrete covered sidewalks must be inspected, certified and maintained as required in the SMP;

- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;

- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

- Engineering Controls may not be discontinued without an amendment or extinguishment of the Environmental Easement.

The Site (Controlled Property) also has a series of Institutional Controls in the form of Site restrictions. Adherence to these Institutional Controls is required under the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- an annual inspection of the Controlled Property will be conducted and an annual certification will be submitted to the Department by a New York State Licensed Professional Engineer, stating that long-term institutional and engineering controls have been properly monitored and maintained, in accordance with the SMP (including documentation of any repairs conducted since the prior certification);

- the use of the groundwater underlying the Controlled Property for any purpose, including but not limited to, potable, process or irrigation water, is prohibited without the implementation of necessary water quality treatment as determined by the New York State Departments of Health and Environmental Conservation;

- any proposed soil excavation or other activities on the property below the composite cover (consisting of asphalt, concrete or a minimum of two (2) feet of clean fill (meeting the Part 375 SCO calculated as the lower of the SCOs for Residential Use and for Protection of Groundwater, or for which specific approval was given by NYSDEC) requires prior notification to NYSDEC, in accordance with the SMP, and the excavated soil and construction waste water must be managed, characterized, and properly disposed of in accordance with the SMP;

- The Controlled Property may be used for Commercial use as defined in 6 NYCRR 375-1.8(g)(ii), as long as the long-term Institutional and Engineering controls set forth in the SMP dated December 2007;

    - single family housing, vegetable gardens, farming, schools and day care facilities are prohibited on the Controlled Property;

    - all Engineering Controls must be operated and maintained as specified in the SMP;

- data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

- on-Site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP

- Grantor of Environmental Easement or successor to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual statement must be certified by an expert that the NYSDEC finds acceptable.

4.9 Deviations from the Remedial Action Workplan

There were no deviations from the approved Remedial Action Workplan.

4.10 Site Management Plan

A SMP has been developed for the Site that provides a detailed description of all procedures required to manage residual contamination at the Site following the completion of the Remedial Action in accordance with the VCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of a Monitoring Plan; (3) development of a plan to maintain all ECs; and (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC.

A copy of the SMP is provided in Appendix D of this FER.

TABLES

TABLE 1
OU-2 HISTORIC GROUNDWATER ANALYTICAL RESULTS SUMMARY: VOCs
Kings Plaza Shopping Center
Brooklyn, New York
(Concentrations reported in µg/L)

PARAMETERS		Ben	Tol	Eth	o-Xyl	m+p-Xyl	IsoP	n-Prop	1,3,5-TMB	T-but	1,2,4-TMB	sec-B	IPT	N-but	Nap	MTBE	TBA	PET	DCE	cis-1,2 DCE	TCE	1,3-DCP	1,2-DCB	1,3-DCB	1,4-DCB	MC	1,2,4-TCB	VC	Total VOCs
NYSDEC Groundwater Quality Standard		0.7	5	5	5	5	5	5	5	5	5	5	5	5	10	10	---	---	5	5	5	5	3	3	3	5	5	2	--
Sampling Point	Sample Date																												
MW-4	11/9-10/1998	2	19	ND	ND	2	ND	ND	2	ND	5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30
	2/25/1999	0.49 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.49
	6/10/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50
	9/28-29/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	12/16-18/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	2/21-23/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23-25/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	8/29-30/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	12/19-21/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14-16/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	5/22-24/2001	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17
	7/31-8/2/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	24	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37
	11/27-29/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
MW-33	9/28-29/1999	ND	ND	35	9.8	12	ND	ND	3.2	ND	9.3	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	69.3
	12/16-18/1999	ND	ND	16	5.7	6	ND	ND	ND	ND	5.7	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.4
	2/21-23/2000	ND	ND	8.1	ND	2.8	ND	ND	ND	4.3	ND	ND	ND	ND	900	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	915.2
	5/23-25/2000	ND	ND	6.3	2.8	2.1	ND	ND	ND	ND	1.7	ND	ND	ND	2.3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.2
	8/29-30/2000	ND	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,300 D	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,305.2
	12/19-21/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14-16/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	5/22-24/2001	ND	ND	4.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	300 D	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	304.9
	7/31-8/2/2001	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	28	350 D	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	380.3
	11/27-29/2001	ND	1.3	4.1	2.3	ND	ND	ND	1.1	ND	2.1	ND	ND	ND	350 D	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	360.9
MW-34	9/28-29/1999	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.4
	12/16-18/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20
	2/21-23/2000	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40.6
	5/23-25/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	8/29-30/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12
	12/19-21/2000	ND	ND	ND	ND	2.9	ND	ND	ND	ND	ND	ND	ND	4.4	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	8.5
	3/14-16/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	43
	5/22-24/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.9
	7/31-8/2/2001	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.6
	11/27-29/2001	13	6.2	5.7	13	18	ND	ND	ND	ND	2.6	ND	ND	ND	5.1	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63.6

KEY:
VOCs - Volatile Organic Compounds
µg/L - micrograms per liter
NYSDEC - New York State Department of Environmental Conservation
Ben - Benzene
Tol - Toluene
Eth - Ethylbenzene
o-Xyl - o-Xylenes
m,p-Xyl - m&p-Xylenes
Iso-p - Isopropylbenzene
n-Prop - n-Propylbenzene
1,3,5-TMB - 1,3,5-Trimethylbenzene
T-but - Tert-Butylbenzene
1,2,4-TMB - 1,2,4-Trimethylbenzene
sec-B - sec-Butylbenzene
IPT - Isopropyltoluene
N-but - n-Butylbenzene
Nap - Naphthalene
MTBE - Methyl Tertiary Butyl Ether
TBA - Tert-butyl alcohol
PET - p-ethyltoluene
DCE- 1,1 Dichloroethene
cis-1,2 DCE - cis 1,2 Dichloroethene
TCE - Trichloroethene
1,3 DCP - 1,3 Dichloropropane
1,2-DCB - 1,2-Dichlorobenzene
1,3-DCB- 1,3-Dichlorobenzene
1,4-DCB- 1,4-Dichlorobenzene
MC - Methylene Chloride
1,2,4-TCB - 1,2,4 Trichlorobenzene
VC - Vinyl Chloride
ND - Not Detected at MDL below NYSDEC Groundwater Quality Standard
NA - Not Analyzed
FP - Not Analyzed due to the presence of Free Product
NP - Data Not Provided
J - Estimated Concentration, Compound Detected but at Concentration Below MDL
D - Diluted Sample
U - Undetected at MDL
MDL - Method Detection Limit

NOTES:
Values in Bold exceed NYSDEC Groundwater Quality Standard.

TABLE 2
OU-2 HISTORIC GROUNDWATER ANALYTICAL RESULTS SUMMARY: SVOCs
Kings Plaza Shopping Center
Brooklyn, New York
(Concentrations reported in µg/L)

PARAMETERS		Nap	2-Mnap	Acn	Flu	Phe	Ant	Flo	Pyr	Di-ETH	Di-Meth	Di-n-OCT	Di-n-b	BbP	BisEP	DBf	Car	Acy	DiMP	B (g,h,i)	B(a)A	B(b)F	B(k)F	B(a)P	Inden	Chry	TOTAL BNAs
NYSDEC Groundwater Quality Standard		10	50	20	50	50	50	50	50	50	50	50	50	50	50	---	---	---	5	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	
Sampling Point	Sample Date																										
MW-4	11/9-10/1998	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
	2/25/1999	ND	NA	37	0.97 J	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.97
	6/10-11/1999	ND	1 J	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33
	9/28-29/1999	ND	1.4	31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32.4
	12/16-18/1999	ND	1.6	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	41.6
	2/21-23/2000	ND	ND	11	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.2
	5/23-25/2000	ND	ND	31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31
	8/29-30/2000	ND	ND	31	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32.2
	12/19-21/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14-16/2001	ND	ND	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 J	ND	ND	8.9 J	ND	ND	ND	ND	ND	ND	ND	ND	34.9
	5/22-24/2001	240 D	15	120 D	65	59	8.2 J	10	4.8 J	21	1.4 J	ND	19	1.3 J	4.5	57	NA	4.3 J	NA	ND	ND	ND	ND	ND	ND	ND	630.5
	7/31-8/1&2/2001	ND	ND	31	ND	ND	ND	ND	ND	9.5 J	ND	ND	ND	ND	3 J	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	43.5
	11/27-29/2001	ND	ND	35	1.2 J	4.2 J	1.3 J	3.6 J	2.5 J	ND	ND	ND	1.2 J	ND	5.4 J	ND	NA	12	NA	ND	1.1 J	ND	1.3 J	ND	ND	1.3 J	70.1
MW-33	9/28-29/1999	640 E	87 E	180 E	93 E	110 E	16	13	7.4	ND	ND	ND	ND	ND	1.5	87 E	ND	5.4	ND	ND	ND	ND	ND	ND	ND	ND	1240.3
	12/16-18/1999	840 D	65 D	200 D	89 D	76 D	73 D	ND	ND	ND	ND	ND	ND	ND	ND	75 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1418
	2/21-23/2000	46	6.4	35	22	18	3.2	2.5	1.6	1	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	152.7
	5/23-25/2000	ND	ND	87	21	9.9 J	3.1 J	3.2 J	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	126.2
	8/29-30/2000	380 D	52	160 D	67	67	86 J	6.1	2.6 J	ND	ND	ND	1.7 J	ND	ND	57	ND	4.3 J	17	ND	ND	ND	ND	ND	ND	ND	900.7
	12/19-21/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14-16/2001	260 D	36	120 D	61	46	6 J	6 J	3.4 J	ND	ND	ND	ND	ND	2.6 J	47	45	3.6 J	ND	ND	ND	ND	ND	ND	ND	ND	636.6
	5/22-24/2001	ND	1.6 J	35	ND	ND	ND	ND	ND	19	ND	ND	14	ND	1.7	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	71.3
	7/31-8/1&2/2001	230 D	11	160 D	67	57	63 J	5.3 J	ND	ND	ND	ND	ND	ND	4 J	57	NA	3.5 J	NA	ND	ND	ND	ND	ND	ND	ND	657.8
	11/27-29/2001	380 D	41	210 D	74	72	9.9 J	12	5.7 J	ND	ND	ND	2.3 J	ND	1.7 J	67	NA	4.9 J	NA	ND	ND	ND	ND	ND	ND	ND	880.5
MW-34	9/28-29/1999	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
	12/16-18/1999	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5
	2/21-23/2000	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
	5/23-25/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
	8/29-30/2000	ND	ND	1.4 J	ND	ND	ND	ND	ND	1.1 J	ND	ND	3.6 J	1.1 J	6.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.1
	12/19-21/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 J	2 J	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6
	3/14-16/2001	5.8 J	ND	6 J	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3 J	2.4 J	2.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.8
	5/22-24/2001	ND	1 J	3.6 J	ND	ND	ND	ND	ND	22	1.2 J	ND	17	ND	4 J	1.1 J	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	49.9
	7/31-8/1&2/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.6 J	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	3.6
	11/27-29/2001	4 J	ND	1.9 J	ND	2 J	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	9.1

KEY:

µg/L - micrograms per liter
NYSDEC - New York State Department of Environmental Conservation
Nap - Naphthalene
2-Mnap - 2-Methylnaphthalene
Acn - Acenaphthene
Flu - Fluorene
Phe - Phenanthrene
Ant - Anthracene
Flo - Fluoranthene
Pyr - Pyrene
Di-ETH - Di-ethylphthalate
Di-Meth - Di-methylphthalate
Di-n-OCT - Di-n-Octylphthalate
Di-n-b - Di-n-butylphthalate
BbP - Butylbenzyl phthalate
BisEP - Bis(2-ethyl-hexyl)phthalate
DBf - Dibenzofuran
Car - Carbazole
Acy - Acenaphthylene
DiMP - 2,4 Dimethylphenol
B (g,h,i) - Benzo (g,h,i) Pyrene
B(a)A - Benzo (a) Anthracene
B(b)F - Benzo (b) Fluoranthene
B(k)F - Benzo (k) Fluoranthene
B(a)P - Benzo (a) Pyrene
Inden - Indeno (1,2,3-cd) Pyrene
Chry - Chrysene
ND - Not Detected
NA - Not Analyzed
FP - Not Sampled due to the presence of free product
NS - Not Sampled

NOTES:

J - Indicates that concentration was detected at a value below the minimum detection limit.
U - Indicates that the sample was undetected.
D - Indicates that the concentration was based on a diluted sample analysis.
E - Indicates that the compound exceeded the laboratories calibration curve for the sample.
Bold - Indicates an exceedance of the NYDEC GWQC.
* 0.002 or Practical Quantitation Limit (PQL), which is the lowest level that can be reliably detected in the laboratory.

TABLE 3
JUNE 2003 SOIL ANALYTICAL RESULTS: PAHs
Kings Plaza Shopping Center
Brooklyn, New York
(Concentrations reported in mg/kg)

PARAMETERS						Nap	Acy	Acn	Flu	Phe	Ant	Flo	Pyr	BaA	Chr	BbF	BkF	BaP	IP	DbA	BP	Total PAHs
PROPOSED NYSDEC TRACK 2-RESTRICTED USE SOIL CLEANUP OBJECTIVES			RESTRICTED COMMERCIAL			500	500	500	500	500	500	500	500	5.6	56	6	56	1	5.6	0.56	500	---
			PROTECTION OF ECOLOGICAL RESOURCES			---	---	20	30	---	---	---	---	---	---	---	---	2.6	---	---	---	---
			PROTECTION OF GROUNDWATER			12	107	98	386	1,000	1,000	1,000	1,000	1	1	1.7	1.7	22	8.2	1,000	1,000	---
Excel Sample No.	Lab Sample No.	Sample Depth	Sample Matrix	Collection Date	Collection Time																	
B3A	439634	5.5 - 6.0	Soil	6/30/2003	1150	0.29 J	0.12 J	1.30 J	0.98 J	9.6	3.9	24	28	11	12	8	11	11	7.2	2.6	8.4	139.39
B12A	439636	5.5 - 6.0	Soil	6/30/2003	1105	0.96 J	0.34 J	3.20 J	4.40 J	52	15	76	81	33	34	26	29	32	21	6.2	23	437.1
B19A	439638	5.5 - 6.0	Soil	6/30/2003	1020	0.22 J	0.049 J	2.5	0.82	5.8	2.4	12	13	3	3	1.6	2.4	2.3	1.3	0.48	1.4	52.27
FB	439640	---	Aq	6/30/2003	1230	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

KEY:
mg/kg - milligrams per kilogram
Nap - Naphthalene
Acy - Acenaphthylene
Acn - Acenaphthene
Flu - Fluorene
Phe - Phenanthrene
Ant - Anthracene
Flo - Fluoranthene
Pyr - Pyrene
BaA - Benzo(a)anthracene
Chr - Chrysene
BbF - Benzo(b)fluoranthene
BkF - Benzo(k)fluoranthene
BaP - Benzo(a)pyrene
IP - Indeno(1,2,3-cd)pyrene
DbA - Dibenz (a,h) anthracene
BP - Benzo (g,h,i) perylene
PAHs - Polynuclear Aromatic Hydrocarbons
ND - Not Detected Above Method Detection Limits
Aq - Aqueous

NOTES:
Samples denoted in Military Time.
Sample depths are reported in feet (ft.) below ground surface.
Bold and Shaded values exceed NYSDEC Recommended Soil Clean-up Objective.

TABLE 4
SUMMARY OF OU-2 QUARTERLY GROUNDWATER ANALYTICAL RESULTS:
VOLATILE ORGANIC COMPOUNDS
Kings Plaza Shopping Center
Brooklyn, New York
NYSDEC VCA No. A2-0403-9911
(Concentrations reported in ug/l)

PARAMETERS					MTBE	Ben	Tol	Etb	Total Xyl	PCE	TCE	c-DCE	t-DCE	1,1-DCE	VC	Chf	Nap	Iso-p	t-Ben	n-Ben	Sec-B	Total VOCs
NEW YORK STATE AMBIENT WATER QUALITY STANDARDS					10	1	5[1]	5[1]	5[1]	5[1]	5[1]	5[1]	5[1]	5	2	7	10	5	---	5	5	---
Excel Sample No.	Sample Matrix	Lab Sample No.	Collection Date	Collection Time																		
MW-4[3]	Aq	377678	9/19/2002	1625	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-33[3]	Aq	377679	9/19/2002	1645	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-34[3]	Aq	377680	9/19/2002	1355	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-45[3]	Aq	377681	9/19/2002	0955	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-46[3]	Aq	377682	9/19/2002	1225	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	32	ND	ND	ND	ND	32
FB[3]	Aq	377683	9/19/2002	1655	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
TB[3]	Aq	377684	9/18/2002	---	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-33[3]	Aq	379626	9/26/2002	1100	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	150	ND	ND	ND	ND	150
FB[3]	Aq	379627	9/26/2002	1115	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
TB[3]	Aq	379628	9/26/2002	---	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-4[4]	Aq	444180	7/17/2003	0940	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND
MW-33[4]	Aq	444186	7/18/2003	0925	NA	ND	ND	ND	ND	2.3	3.4	9.1	ND	ND	1.8 J	ND	NA	NA	NA	NA	NA	16.6
MW-34[4]	Aq	444181	7/17/2003	1110	NA	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	ND	ND	NA	NA	NA	NA	NA	1.4
MW-45[4]	Aq	444182	7/17/2003	0815	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND
MW-46[4]	Aq	444178	7/17/2003	0900	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND
MW-33[4]	Aq	452825	8/18/2003	0935	NA	ND	ND	ND	ND	ND	ND	1.8 J	ND	ND	0.8 J	ND	NA	NA	NA	NA	NA	2.6
FB-1[4]	Aq	444189	7/18/2003	1100	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND
FB	Aq	452826	8/18/2003	0945	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TB-1[4]	Aq	444190	7/16/2003	---	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND

KEY:
ug/l - micrograms per liter
VOCs - Volatile Organic Compounds
MTBE - Methyl Tertiary Butyl Ether
Ben - Benzene
Tol - Toluene
Etb - Ethylbenzene
Total Xyl - Total Xylene
PCE - Tetrachloroethene
TCE - Trichloroethene
c-DCE - cis-1,2 - Dichloroethene
t-DCE - trans - 1,2 - Dichloroethene
1,1-DCE - 1,1-Dichloroethene
VC - Vinyl Chloride
Chf - Chloroform
Nap - Naphthalene
Iso-p - Isopropyl benzene
t-Ben - tert-Butylbenzene
n-Ben - n-Propylbenezene
Sec-B - sec-Butylbenzene
Aq - Aqueous
ND - Not Detected Above Method Detection Levels
NA - Not Analyzed
D - Indicates sample dilution

NOTES:
Sample times denoted in military time.
Guidance values may be used where a standard for a substance or group of substances has not been established for a particular water class and type of value.
Bold and Shaded - Indicates an exceedance of the New York Groundwater Quality Criteria.
(1) - The compound is included in a principal organic contaminant (POC) list and therefore the POC general standard for groundwater is used.
(2) - Method Detection Level exceeds New York State Ambient Water Quality Standards due to high sample dilution.
(3) - Indicates sample was analyzed by Method 8021B.
(4) - Indicates sample was analyzed by Method 8260B.

TABLE 5
SUMMARY OF OU-2 QUARTERLY GROUNDWATER ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS
Kings Plaza Shopping Center
Brooklyn, New York
NYSDEC VCA No. A2-0403-9911
(Concentrations reported in ug/l)

PARAMETERS					Nap	Acn	Flu	Phe	Ant	Flo	Pyr	B(a)A	Chr	BeP	B(b)F	B(k)F	B(a)P	Inden	Dibenz	Ben (g,h,I)	Total SVOCs
NEW YORK STATE AMBIENT WATER QUALITY STANDARDS					10	20	50	50	50	50	50	0.002	0.002	5	0.002	0.002	0.002	0.002	50	5*	---
Excel Sample No.	Sample Matrix	Lab Sample No.	Collection Date	Collection Time																	
MW-4	Aq	377678	9/19/2003	1625	1.0 J	33	1.1 J	1.5 J	0.3 J	1.0 J	0.6 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	38.5
MW-33	Aq	377679	9/19/2003	1645	250	220	160	160	19 J	20 J	10 J	1.3 J	0.6 J	NA	ND	ND	ND	ND	ND	ND	840.9
MW-34	Aq	377680	9/19/2003	1355	ND	5.1 J	ND	ND	ND	0.3 J	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	5.4
MW-45	Aq	377681	9/19/2003	0955	ND	0.8 J	ND	0.3 J	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	1.1
MW-46	Aq	377682	9/19/2003	1225	ND	1.5 J	0.2 J	ND	ND	0.3 J	0.4 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	2.4
FB	Aq	377683	9/19/2002	1655	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
MW-4	Aq	444180	7/17/2003	0940	0.2 J	29	0.5 J	2.4 J	0.5 J	8.1 J	6.6 J	3.6	5.3 J	NA	4.5	5	4.9	3.3	ND	3.8 J	77.7
MW-33	Aq	444186	7/18/2003	0925	21	44	23	25	3.2 J	3.1 J	1.5 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	120.8
MW-34	Aq	444181	7/17/2003	1110	1.0 J	4.7 J	1.1 J	1.0 J	ND	0.4 J	0.3 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	8.5
MW-45	Aq	444182	7/17/2003	0815	ND	0.8 J	ND	ND	ND	0.3 J	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	1.1
MW-46	Aq	444178	7/17/2003	0900	3.4 J	2.4 J	1.2 J	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	7
MW-33	Aq	452825	8/18/2003	0935	11	43	21	26	3.4 J	2.8 J	1.4 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	108.6
FB	Aq	444189	7/18/2003	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FB	Aq	452826	8/18/2003	0945	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND

KEY:
ug/l - micrograms per liter
SVOCs - Semi Volatile Organic Compounds
Nap - Naphthalene
Acn - Acenaphthene
Flu - Fluorene
Phe - Phenanthrene
Ant - Anthracene
Flo - Fluoranthene
Pyr - Pyrene
B(a)A - Benzo(a)anthracene
Chr - Chrysene
BeP - bis(2-Ethylhexyl)phthalate
B(b)F - Benzo(b)fluoranthene
B(k)F - Benzo(k)fluoranthene
B(a)P - Benzo(a)pyrene
Inden - Indeno(1,2,3-cd)pyrene
Dibenz - Dibenz(a,h)anthracene
Ben(g,h,I) - Benzo(g,h,I)perylene
Aq - Aqueous
ND - Not Detected
NA - Not Analyzed

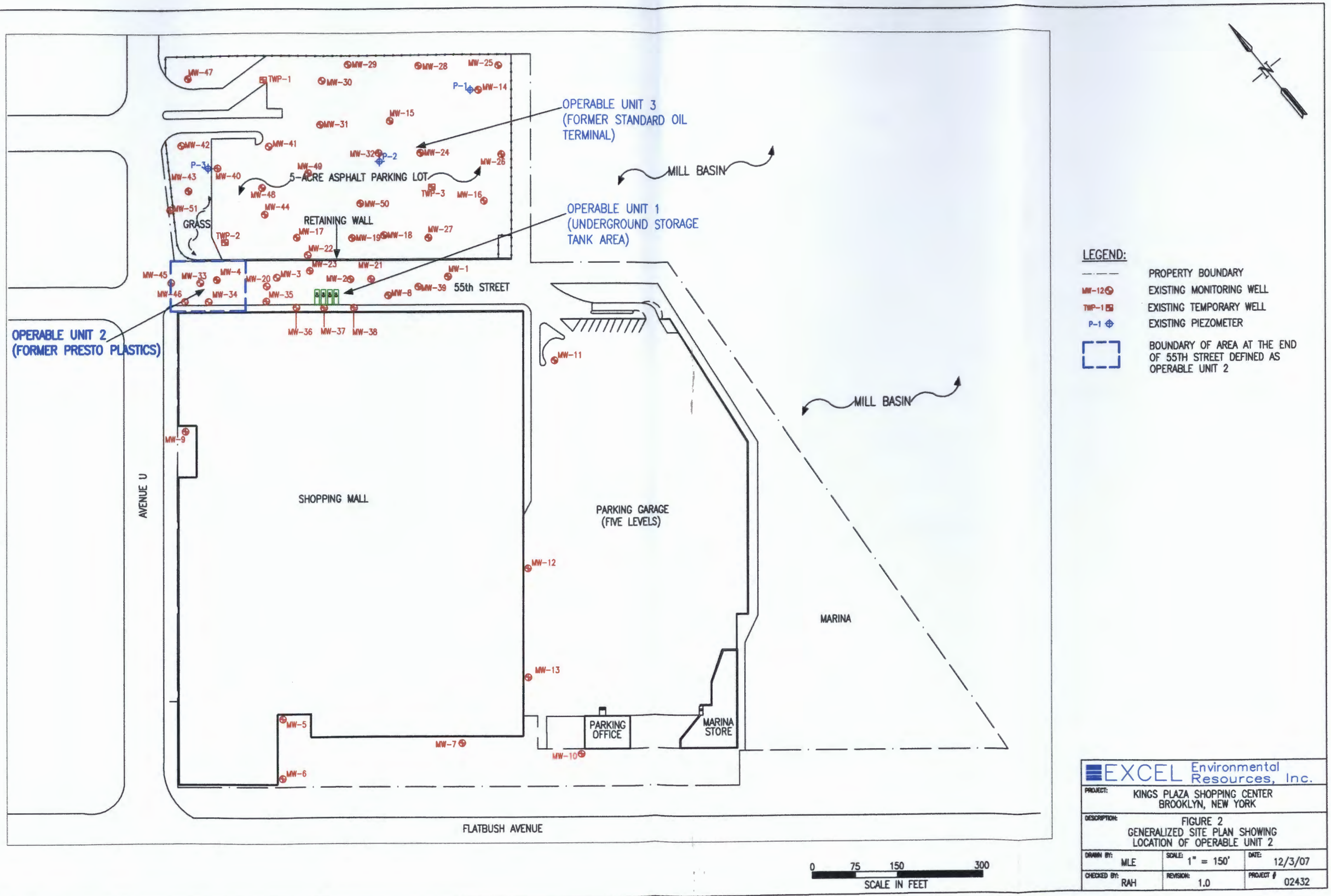
NOTES:
Sample times denoted in military time.
Guidance values may be used where a standard for a substance or group of substances has not been established for a particular water class and type of value.
Bold and Shaded - Indicates an exceedance of the New York Groundwater Quality Criteria.
* - The compound is included in a principal organic contaminant (POC) list and therefore the POC general standard for groundwater is used.
J - The result is less than the specified quantation limit but greater than zero. The concentration given is an approximate value.

FIGURES

SOURCE:
UNITED STATES GEOLOGICAL SURVEY
7.5 MINUTE SERIES (TOPOGRAPHIC)
CONEY ISLAND, NY QUADRANGLE
1995

EXCEL ENVIRONMENTAL RESOURCES, INC.		
KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK		
FIGURE 1 SITE LOCATION MAP		
DRAWN BY: NA	SCALE: 1:24,000	10/17/2003
CHECKED BY: EM	REVISION: 2.0	PROJECT #: 02432

G:\PROJECTS\32-OU 2\FIGURES\SITEPLAN-REVISED.DWG

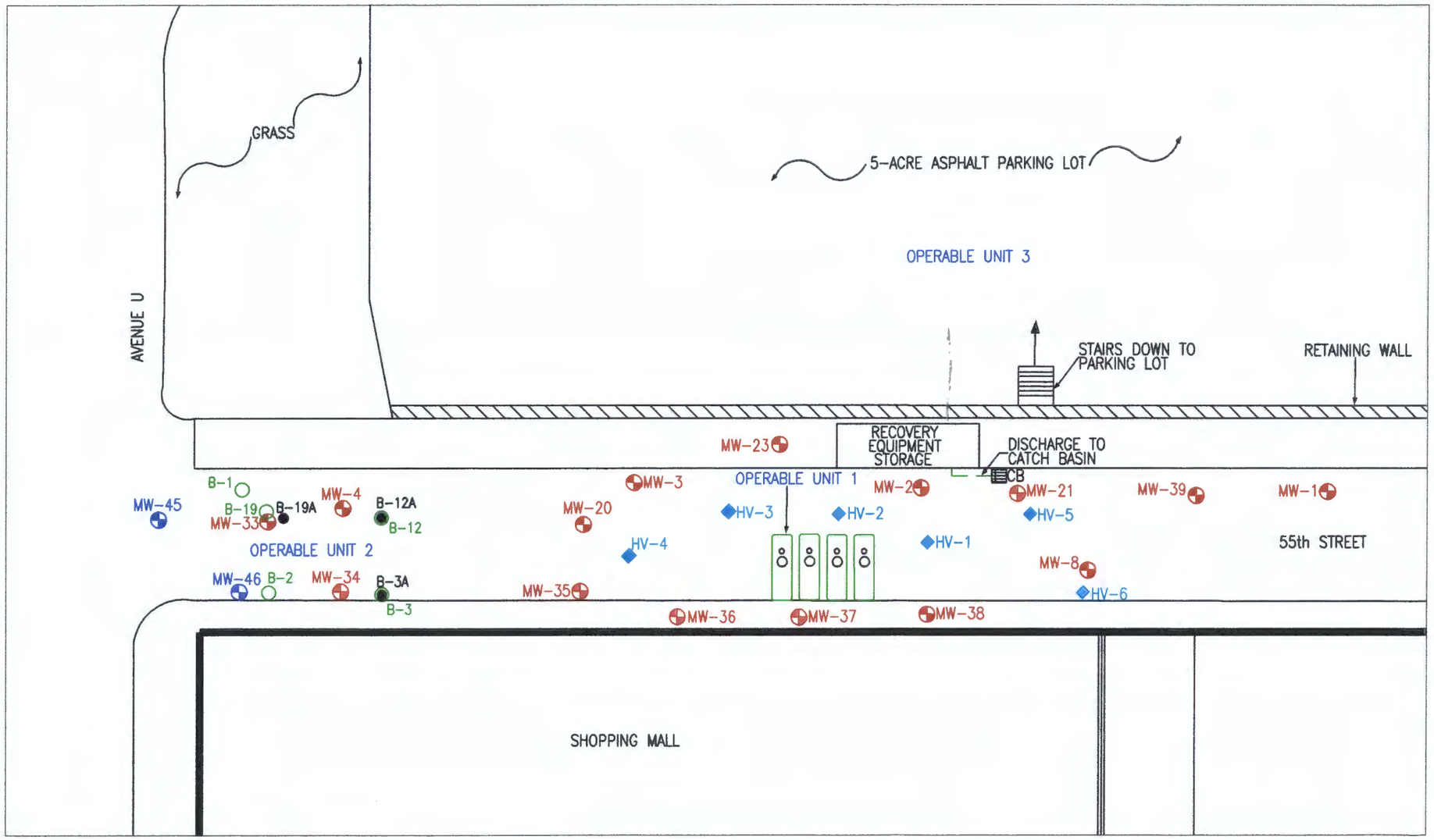


EXCEL Environmental Resources, Inc.

PROJECT:	KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 2 GENERALIZED SITE PLAN SHOWING LOCATION OF OPERABLE UNIT 2

DRAWN BY: MLE	SCALE: 1" = 150'	DATE: 12/3/07
CHECKED BY: RAH	REVISION: 1.0	PROJECT #: 02432

G:\02432-OU 2\FIGURES\FIGURE 3.dwg



LEGEND:

- MW-1 MONITORING WELL
- MW-45 NEW MONITORING WELL
- HV-6 HVDPE WELL
- B-12 FORMER SOIL BORING CONDUCTED BY IVI
- B-3A SOIL BORING CONDUCTED BY EXCEL IN JUNE 2003
- DISCHARGE PIPE
- CB CATCH BASIN
- EXISTING UNDERGROUND STORAGE TANK

SCALE IN FEET

0 50 100 150

EXCEL Environmental Resources, Inc.

PROJECT:	KING'S PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 3 SITE PLAN SHOWING SOIL BORING AND MONITORING WELL LOCATIONS

DRAWN BY: MLE	SCALE: 1" = 50'	DATE: 8/13/02
CHECKED BY: EM	REVISION:	PROJECT #: 01363

G:\02432-OU 2\FIGURES\FIGURE 4.dwg

GRASS

B-19A (5.5'-6.0')	6/30/2003
BaA	3
Chr	3
BbF	1.6
BkF	2.4
BaP	2.3
DbA	0.48
TOTAL PAHs	52.27

B-12A (5.5'-6.0')	6/30/2003
Phe	52
Flo	76
Pyr	81
BaA	33
Chr	34
BbF	26
BkF	29
BaP	32
IP	21
DbA	6.2
TOTAL PAHs	437.1

5-ACRE ASPHALT PARKING LOT

OPERABLE UNIT 3

AVENUE U

STAIRS DOWN TO PARKING LOT

RETAINING WALL

MW-23

RECOVERY EQUIPMENT STORAGE

DISCHARGE TO CATCH BASIN

CB

MW-3

OPERABLE UNIT 1

MW-2

MW-21

MW-39

MW-1

MW-20

HV-3

HV-2

HV-5

MW-4

MW-45

MW-33

HV-4

HV-1

55th STREET

OPERABLE UNIT 2

MW-8

MW-46

MW-34

HV-6

MW-35

MW-36

MW-37

MW-38

SHOPPING MALL

B-3A (5.5'-6.0')	6/30/2003
BaA	11
Chr	12
BbF	8
BkF	11
BaP	11
IP	7.2
DbA	2.6
TOTAL PAHs	139.39

SAMPLE LOCATION

SAMPLE DATE

B-12A	6/30/03
TOTAL PAHs	437.1

ANALYTICAL RESULT IN MILLIGRAM PER KILOGRAM (MG/KG)

ANALYTICAL PARAMETER

LEGEND:

- LATERAL EXTENT OF OPERABLE UNIT 2 INSTITUTIONAL AND ENGINEERING CONTROLS
- ASPHALT PAVEMENT CAP ENGINEERING CONTROLS
- CONCRETE SIDEWALK CAP ENGINEERING CONTROLS
- MW-1 MONITORING WELL
- MW-45 NEW MONITORING WELL
- HV-6 HVDPE WELL
- B-3A SOIL BORING
- DISCHARGE PIPE
- CB CATCH BASIN
- EXISTING UNDERGROUND STORAGE TANK
- Phe PHENANTHRENE
- Flo FLUORANTHENE
- Pyr PYRENE
- BaA BENZO(a)ANTHRACENE
- Chr CHRYSENE
- BbF BENZO(b)FLUORANTHENE
- BkF BENZO(k)FLUORANTHENE
- BaP BENZO(a)PYRENE
- IP INDENO(1,2,3-cd)PYRENE
- DbA DIBENZ(a,h)ANTHRACENE
- PAHs POLYNUCLEAR AROMATIC HYDROCARBONS
- NYSDEC NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
- **BOLD** VALUE EXCEEDS NYSDEC TAGM#4046 RECOMMENDED SOIL CLEAN-UP OBJECTIVES

NOTE:

ONLY EXCEEDANCES OF THE NYSDEC TAGM#4046 RECOMMENDED SOIL CLEAN-UP OBJECTIVES ARE REPORTED

SCALE IN FEET

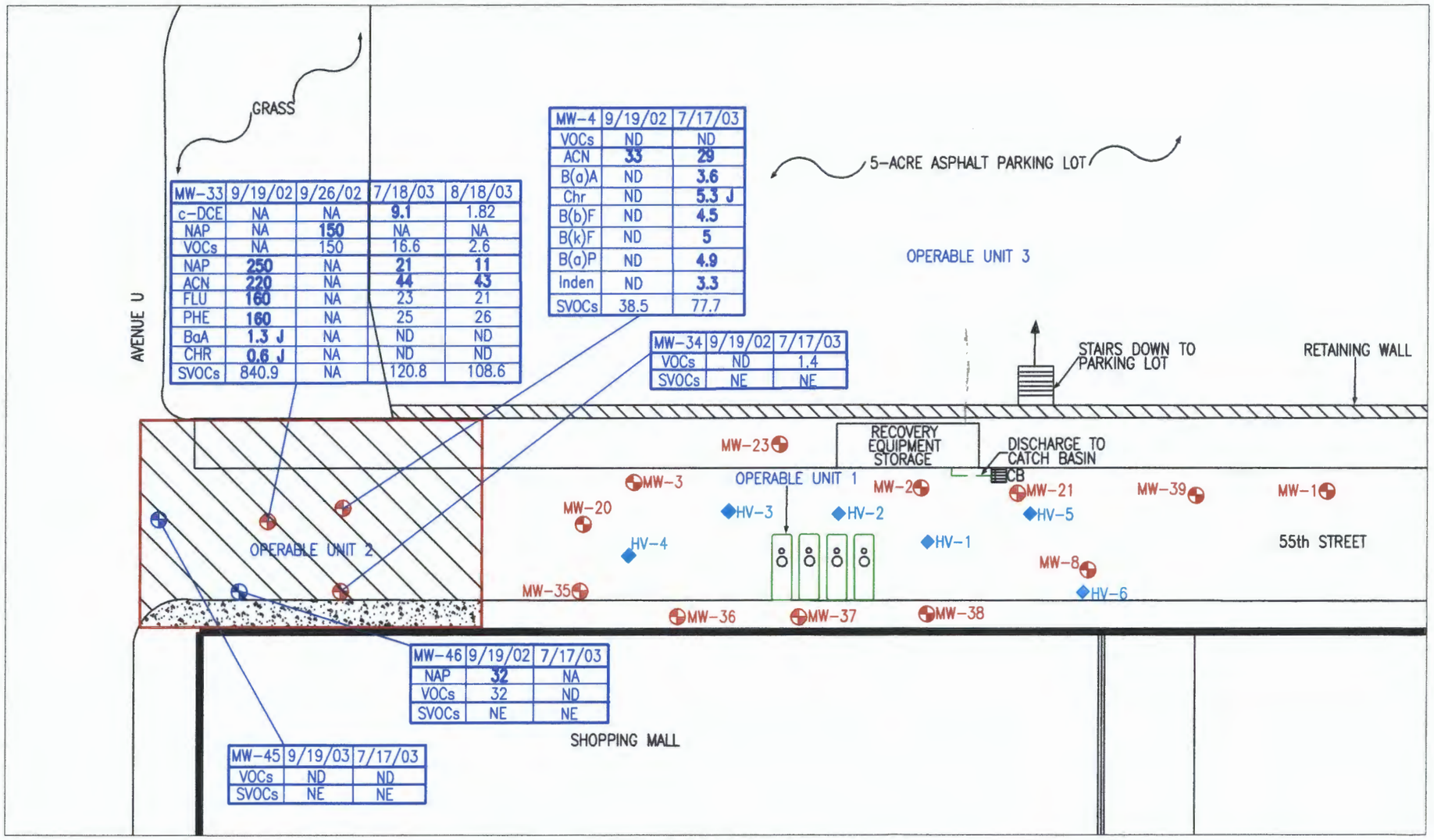
0 50 100 150

EXCEL Environmental Resources, Inc.

PROJECT:	KING'S PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 4 SOIL ANALYTICAL RESULTS ABOVE NYSDEC RECOMMENDED CLEAN-UP OBJECTIVES

DRAWN BY: MLE	SCALE: 1" = 50'	DATE: 3/11/08
CHECKED BY: EM	REVISION:	PROJECT # 01363

K:\Projects\02432 OU-2\figures\FIGURE 5.dwg



MW-33	9/19/02	9/26/02	7/18/03	8/18/03
c-DCE	NA	NA	**9.1**	1.82
NAP	NA	**150**	NA	NA
VOCs	NA	150	16.6	2.6
NAP	**250**	NA	**21**	**11**
ACN	**220**	NA	**44**	**43**
FLU	**160**	NA	23	21
PHE	**160**	NA	25	26
BaA	**1.3 J**	NA	ND	ND
CHR	**0.6 J**	NA	ND	ND
SVOCs	840.9	NA	120.8	108.6

MW-4	9/19/02	7/17/03
VOCs	ND	ND
ACN	**33**	**29**
B(a)A	ND	**3.6**
Chr	ND	**5.3 J**
B(b)F	ND	**4.5**
B(k)F	ND	**5**
B(a)P	ND	**4.9**
Inden	ND	**3.3**
SVOCs	38.5	77.7

MW-34	9/19/02	7/17/03
VOCs	ND	1.4
SVOCs	NE	NE

MW-46	9/19/02	7/17/03
NAP	**32**	NA
VOCs	32	ND
SVOCs	NE	NE

MW-45	9/19/03	7/17/03
VOCs	ND	ND
SVOCs	NE	NE

LEGEND:

- LATERAL EXTENT OF OPERABLE UNIT 2 INSTITUTIONAL AND ENGINEERING CONTROLS
- ASPHALT PAVEMENT CAP ENGINEERING CONTROLS
- CONCRETE SIDEWALK CAP ENGINEERING CONTROLS
- MW-1 MONITORING WELL
- MW-45 NEW MONITORING WELL
- HV-6 HVDPE WELL
- DISCHARGE PIPE
- CB CATCH BASIN
- EXISTING UNDERGROUND STORAGE TANK
- c-DCE cis-1,2-DICHLOROETHENE
- VOCs TOTAL VOLATILE ORGANIC COMPOUNDS
- NAP NAPHTHALENE
- ACN ACENAPHTHENE
- B(a)A BENZO(a)ANTHRACENE
- Chr CHRYSENE
- B(b)F BENZO(b)FLUORANTHENE
- B(k)F BENZO(k)FLUORANTHENE
- B(a)P BENZO(a)PYRENE
- Inden INDENO(1,2,3-cd)PYRENE
- SVOCs TOTAL SEMI VOLATILE ORGANIC COMPOUNDS
- ND NOT DETECTED
- NA NOT ANALYZED
- NE NO EXCEEDANCE OF THE NEW YORK STATE AMBIENT WATER QUALITY STANDARD OR GUIDANCE VALUE
- **BOLD** VALUE EXCEEDS NEW YORK STATE GROUNDWATER QUALITY CRITERIA
- J RESULT IS LESS THAN QUANTITATION LIMIT AND IS AN APPROXIMATE VALUE

NOTE:

ONLY EXCEEDANCES OF THE NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND/OR GUIDANCE VALUES ARE REPORTED.

MW-34	7/17/03
VOCs	1.4

- SAMPLE LOCATION
- SAMPLE DATE
- ANALYTICAL RESULT IN MICROGRAMS PER LITER (ug/L)
- ANALYTICAL PARAMETER

SCALE IN FEET

0 50 100 150

EXCEL Environmental Resources, Inc.

PROJECT:	KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 5 GROUNDWATER ANALYTICAL RESULTS

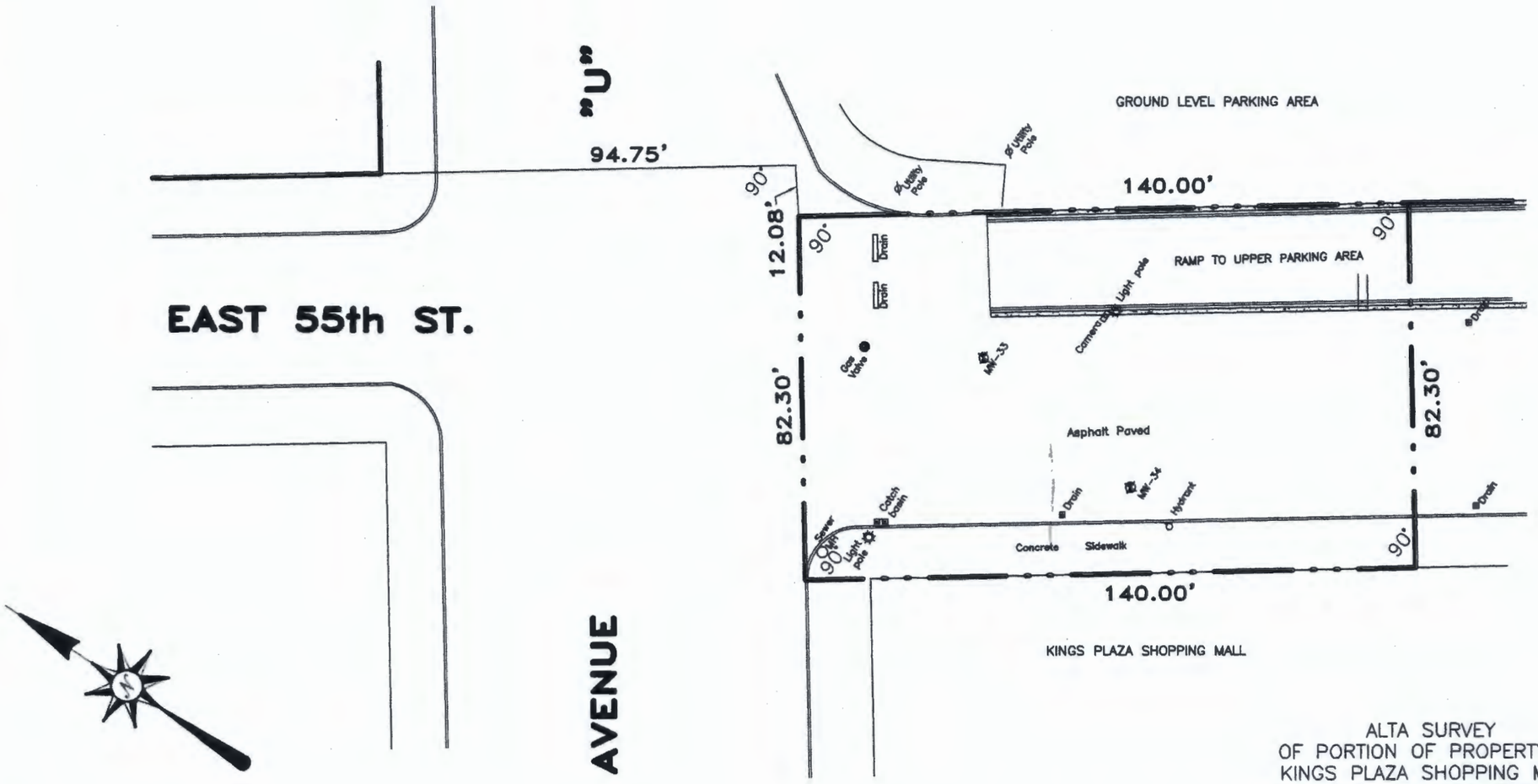
DRAWN BY:	SCALE:	DATE:
MLE	1" = 50'	11/5/03
CHECKED BY:	REVISION:	PROJECT #
EM		02432

APPENDIX A

ELECTRONIC COPY OF FINAL ENGINEERING REPORT AND PROJECT DOCUMENTS

APPENDIX B

METES AND BOUNDS



ALTA SURVEY
OF PORTION OF PROPERTY AT
KINGS PLAZA SHOPPING MALL
AVENUE "U" AND EAST 55TH STREET
BROOKLYN, NEW YORK

SURVEYED APRIL 21, 2008

LEGAL DESCRIPTION

ALL that certain plot, piece or parcel of land situate, lying and being in the Borough of Brooklyn, County of Kings, State of New York, being more particularly bounded and described as follows:

BEGINNING at a point distant the following two (2) courses:

1. RUNNING southerly along the prolongation of the easterly side of East 55th Street a distance of 94.75 feet from the intersection of the easterly side of East 55th Street and the northerly side of Avenue U;
2. THENCE westerly at right angles a distance of 12.08 feet to the true point or place of BEGINNING.

RUNNING THENCE southerly parallel with the easterly side of East 55th Street 140.00 feet;
THENCE westerly at right angles 82.30 feet;
THENCE northerly at right angles 140.00 feet;
THENCE easterly at right angles 82.30 feet to the point or place of BEGINNING.
Containing within said bounds 11,522 ± square feet.

ALBERT W. TAY
LICENSED LAND SURVEYOR
P.O. BOX 312, PLAINVIEW, NY 11803
TEL (516) 433-3725 FAX (516) 433-0409
Records of
BERTRAM F. ALLEN CE
BERTRAM F. ALLEN Jr
Port Washington, New York

SCALE 1"= 30'

No. 08058

EMBOSSED SEAL AND SIGNATURE

ALBERT W. TAY
LICENSE NO. 35618

APPENDIX C

SOIL BORING LOGS

02432
boring logs

EXCEL Environmental Resources, Inc.

LOG OF BORING B-3A

Sheet 1 of 1

PROJECT NAME: Former Presto Plastics	**ELEVATION AND DATUM:**
LOCATION: Brooklyn, NY	**START DATE:** 6/30/03 **FINISH DATE:** 6/30/03
DRILLING CONTRACTOR: Aquifer Drilling & Testing	**HYDRO/GEOLOGIST:** Eric Mertz
DRILLING RIG: CME 75	**DRILLER:** Lloyd Adams
DRILLING METHOD: Hollow Stem Augar	**DRILLING ASSISTANT:** Glenn Stringham
SAMPLING DEVICES: 2-inch diameter, 24-inch split spoon	**COMPLETION DEPTH:** 7.0' bgs

NO.	INCHES DRIVEN/ RECVRD	BLOWS	DEPTH	STRATA	SOIL DESCRIPTION	PID READINGS INTERV. (INCHES)	PID (PPM)	REMARKS
			1		0.0-1.0 - Asphalt and Asphalt Bedding		N/M N/M	Augered w/ HSA
		25 17	2		1.0-2.5 - Brown f-m Sand, some gray coarse sand		2.1 1.0	
		27					2.4	
		40	3		2.5-5.0 - Brown f-m Sand with Black and white Coarse Sand,		0.5	
		25					1.4	
		22	4				0.1	
		22			wood and glass (S+P Historic Fill)		0.1	
		20	5				3.5	
		11			5.0-6.5 - Black and white coarse sand, wood + glass (S+P Hist. Fill)		0.3	
		9	6				0.3	
		9					0.3	
		9	7		6.5-7.0 - Gray m-c Sand		0.4	moist @ 7.0
			8					Completed at 7.0' bgs
			9					
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTES:

DTW @ MW-33 6.80' bgs

EXCEL
Environmental
Resources, Inc.

LOG OF BORING B-12A

Sheet 1 of 1

PROJECT NAME: Former Presto Plastics		**ELEVATION AND DATUM:**	
LOCATION: Brooklyn, NY		**START DATE:** 6/30/03	**FINISH DATE:** 6/30/03
DRILLING CONTRACTOR: Aquifer Drilling & Testing		**HYDRO/GEOLOGIST:**	Eric Mertz
DRILLING RIG: CME 75		**DRILLER:**	Lloyd Adams
DRILLING METHOD: Hollow Stem Augar		**DRILLING ASSISTANT:**	Glenn Stringham
SAMPLING DEVICES: 2-inch diameter, 24-inch split spoon		**COMPLETION DEPTH:**	9.0' bgs

NO.	INCHES DRIVEN/ RECVRD	BLOWS	DEPTH	STRATA	SOIL DESCRIPTION	PID READINGS INTERV. (INCHES)	PID READINGS PID (PPM)	REMARKS
			1		0.0-1.0 - Asphalt + Bedding		N/M N/M	HSA to 1.0
		10 10	2		1.0-3.0 - Gray F-m Sand		2.7 0.1	
		9 12	3				0.3 0.4	
		12 8	4		3.0-5.0 - Brown F-m Sand and Clay, Some Black and White Coarse Sand (S+P H.S+ Fill)		0.8 0.3	
		8 7	5				1.4 1.5	
		14 14	6		5.0-7.0 - Black + White m-c Sand, some wood (C+P H.S+ Fill)		0.4 1.5	
		9 8	7				0.2 0.1	
		9 7	8		7.0-8.0 - Gray m-c Sand		N/M N/M	moist @ 7.0
		5 7	9				N/M N/M	
			10					Completed at 9.0' bgs
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTES:

DTW @ MW-33 6.80' bgs

Collected B-12A (5.5-6.0) for laboratory analysis

EXCEL Environmental Resources, Inc.

LOG OF BORING B7A

Sheet 1 of 1

PROJECT NAME: Former Presto Plastics	**ELEVATION AND DATUM:**
LOCATION: Brooklyn, NY	**START DATE:** 6/30/03 **FINISH DATE:** 6/30/03
DRILLING CONTRACTOR: Aquifer Drilling & Testing	**HYDRO/GEOLOGIST:** Eric Mertz
DRILLING RIG: CME 75	**DRILLER:** Lloyd Adams
DRILLING METHOD: Hollow Stem Augar	**DRILLING ASSISTANT:** Glenn Stringham
SAMPLING DEVICES: 2-inch diameter, 24-inch split spoon	**COMPLETION DEPTH:** 6.5 - 6.5

NO.	INCHES DRIVEN/ RECVRD	BLOWS	DEPTH	STRATA	SOIL DESCRIPTION	PID READINGS INTERV. (INCHES)	PID READINGS PID (PPM)	REMARKS
					0.0-0.5 - Asphalt + Bedding		N/M	HSA
		40	1		0.5-1.0 - Concrete		N/M	
		10			1.0-2.0 - Gray F-m Sand, some silt + clay, some gravel m		0.1	
		9	2				0.1	
		10			2.0-5.5 - Brown F-m sand some silt and clay		1.1	
		7	3				0.1	
		8					0.4	
		8	4				0.3	
		6			~~4-5.5~~		0.2	
		8	5				0.1	
		9					0.4	
		6	6		5.5-6.5 - Black and white coarse sand some wood + glass		0.4	(S+D Hrs + =11)
		6					1.8	
			7					Completed @ 6.5
			8					
			9					
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTES:

DTW @ MW-33 ~~6.40 6.5~~
6.90 6.5

APPENDIX D

SITE MANAGEMENT PLAN (SMP)

SITE MANAGEMENT PLAN
FORMER PRESTO PLASTICS (OU-2)
KINGS PLAZA SHOPPING CENTER
BROOKLYN, NEW YORK

PURSUANT TO NYSDEC VOLUNTARY
CLEANUP AGREEMENT
DATED FEBRUARY 26, 2001
NYSDEC VCA No. A2-0403-9911

TECHNICAL REPORT
AND
APPENDICES A THROUGH E

APRIL 2008

PREPARED FOR:

VORNADO REALTY TRUST
PARAMUS, NEW JERSEY

PREPARED BY:

EXCEL ENVIRONMENTAL RESOURCES, INC.
AND
EXCEL ENVIRONMENTAL ENGINEERING, P.C.

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SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL ACTON PROGRAM

1.1 Introduction

This document is required for fulfillment of Remedial Action at the Former Presto Plastics Area referred to as Operable Unit (OU)-2 (hereafter referred to as OU-2 or the Site) under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by New York State Department of Environmental Conservation (NYSDEC or Department). The Site was investigated in accordance with the Voluntary Cleanup Agreement (VCA) No. A2-0403-9911 as executed on February 26, 2001.

1.1.1 General

Alexander's, Kings Plaza Center, Inc. (Alexander's or Volunteer) entered into a VCA with the NYSDEC to investigate the OU-2 Site located at 5100 Kings Plaza, Brooklyn, Kings County, New York. This VCA required the Volunteer to investigate and remediate soil and groundwater quality associated with documented historic fill within the area defined as OU-2 (contaminated area). A map of the Site location is shown in Figure 1. A generalized site plan showing the property boundaries and the area defined as OU-2 is shown in Figure 2.

After completion of the work described in the November 2003 Remedial Investigation Report Addendum (RIRA) and May 2005 Remedial Action Workplan (RAW), some contamination was left in the subsurface at this Site, which is hereafter referred to as 'residual contamination.' This Site Management Plan (SMP) was prepared to manage residual contamination at the Site in perpetuity or until extinguishment of the Environmental Easement in accordance with 6 NYCRR Part 375. The management of the "residual contamination" will consist of Engineering Controls under an Environmental Easement. All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by Excel Environmental Resources (Excel) on behalf of Alexander's, the property owner and Vornado Realty Trust (Vornado), a representative of the owner and in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated December 2002, and the guidelines provided by NYSDEC. This SMP addresses the means for implementation of Institutional Controls (ICs) and Engineering Controls (ECs), which are required by the Environmental Easement for the Site.

1.1.2 Purpose

The Site contains residual contamination, specifically concentrations of Base Neutral Organic Compounds (BNs) in subsurface fill that meets the NYSDEC definition of contaminated historic fill (defined as non-native fill that was contaminated prior to emplacement; usually due to the presence of ash and cinders which can contribute BNs, metals, and other contaminants to the fill). As the Department is aware, the soil and groundwater conditions in the area defined as OU-2 have been attributed to the occurrence of contaminated historic fill.

ECs have been incorporated into the Site remedy to provide proper management of residual contamination in the future to ensure protection of public health and the environment. A Site-specific Environmental Easement has been recorded with the Kings County Clerk that provides an enforceable means to ensure the continued and proper management of residual contamination and protection of public health and the environment. It requires strict adherence to all ECs and all ICs on this Site by NYSDEC by the grantor of the Environmental Easement and any and all successors and assigns of the grantor. ICs provide restrictions on Site usage and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP includes all methods necessary to ensure compliance with all ECs and ICs required by the Environmental Easement for residual contamination at the Site. The SMP has been approved by the NYSDEC, and compliance with this Plan is required by the grantor of the Environmental Easement and grantor's successors and assigns. This plan is subject to change by NYSDEC.

Site management is the last phase of the remediation process and is triggered by the approval of the Final Engineering Report and issuance of the Technical Satisfactory Completion Memorandum (TSCM) by NYSDEC. The SMP continues in perpetuity or until extinguished in accordance with 6NYCRR Part 375. It is the responsibility of the Environmental Easement grantor, and its successors and assigns to ensure that all Site Management responsibilities under this plan are performed.

The SMP provides a detailed description of all procedures required to manage residual contamination at the Site following the completion of the Remedial Action in accordance with the VCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of a Monitoring Plan; (3) development of a plan to maintain all ECs; and (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC.

To address these needs, this SMP includes three plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; and (3) Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC.

Site Management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be annually.

Important notes regarding this SMP are as follows:

- This SMP defines Site-specific implementation procedures as required by the Environmental Easement. The penalty for failure to implement the SMP is revocation of the TSCM;
- The VCA (No. A2-0403-9911) for the Site requires conformance with this SMP, and therefore, serves as a contractual binding authority under which this SMP is to be implemented. The NYS BCP law itself also requires the preparation of a SMP (formerly known as an Operation, Maintenance and Monitoring Plan) in ECL 27-1415 and 27-1419. Therefore, the VCA is a binding contract and the NYS BCP law is statutory authority under which this SMP is required and is to be implemented.
- At the time this report was prepared, the SMP and all Site documents related to Remedial Investigation and Remedial Action are maintained at the NYSDEC Region 2 offices in Long Island City. At the time of SMP submission (November 2007), the Site documents can also be found in the repositories established for this project, including:

Brooklyn Public Library
Flatbush Branch
2065 Flatbush Avenue
Brooklyn, NY 11234

1.2 Site Background

1.2.1 Site Location and Description

The portion of the Former Presto Plastics Area that is identified as OU-2 is comprised of approximately 0.29-acres located at the northern end of the 55th Street access road to the Kings Plaza Shopping Center as shown on Figure 2. The Kings Plaza Shopping Center is a ±31-acre parcel identified on local tax maps as Section 1, Block 847, Lots 50 and 55. Figure 1 shows the location of the Site on the Coney Island, N.Y. United States Geological Survey (USGS) 7.5 Minute Series topographic map. The Site is bounded by Avenue U to the north, the Kings Plaza Shopping Center to the west, a paved parking area that is part of the Kings Plaza property (OU-3) to the east, and the 55th Street access road and OU-1 to the south. As shown on Figure 1, the closest surface water body is the Mill Basin located immediately adjacent to the southern side of the Kings Plaza Shopping Center.

1.2.2 Site History

The area identified as OU-2 is currently owned by Alexander's, a majority-owned subsidiary to Vornado. This area is currently identified as the northern end of the 55th Street access road to the Kings Plaza Shopping Center, which has only been used as an access road since Alexanders'

acquisition and development of the property in the early 1970s. Review of existing environmental reports indicates that Presto Plastic Products Company, Inc. and its successors operated at the Site from the early 1940s to the mid-1960s.

According to a Phase I Environmental Site Assessment (ESA) prepared by Certified Engineering and Testing Company, Inc., approximately 20 railroad tankers were uncovered and removed from the Kings Plaza property in 1969. These tankers were reportedly used as petroleum and/or chemical storage tanks by the Presto Plastic Products Company, Inc. and were in approximately the same location as the Macy's building located to the west of the 55th Street access road. Review of Sanborn™ Fire Insurance Maps of the Site and a 1951 aerial photograph of the Site does not indicate that any operations were specifically located at the northern end of 55th Street in the immediate vicinity of the area defined as OU-2 during the time period shown on the maps and the aerial photographs reviewed.

1.2.3 Site-Specific Geology

The following summarizes key aspects of the site-specific geology based on review of the previous environmental reports and review of soil boring logs prepared by others and Excel for the Site.

- The overburden soil across the Site consists predominantly of coarse to fine-grained sandy fill material to a depth of approximately three to 10 feet below ground surface (bgs). With depth, the fill is increasingly fine-grained with higher amounts of silt;
- The fill composition is heterogeneous and contains varying amounts of wood, brick, ash and cinders, coal, glass, cobbles, shells, and other miscellaneous materials;
- Underlying the fill and silty sand is a silty, organic clay stratum that appears to be native estuarine sediments deposited prior to the initial development of the property; and
- As detailed in a previous RIRA and RAW prepared by Excel in July 2003 for OU-3, the clay is laterally continuous across the Site and, consistent with an estuarine depositional environment, increases in thickness from north to south towards the Mill Basin.

1.2.4 Site-Specific Hydrogeology

- Shallow groundwater occurs under unconfined water table conditions in the upper sandy fill material at approximately six feet below ground surface and the groundwater flow direction is generally towards the south and southeast across the Site although there are areas of localized mounding. As shown in Figure 3, the primary groundwater flow direction in the vicinity of OU-2 is apparently toward the south and southwest. As detailed in the November 2003 RIRA, data provided by the installation of additional monitoring wells in this area also indicates a component of flow toward the northwest;
- The organic clay is underlain by alternating sand and silt deposits. The data indicate that groundwater occurs within this lower formation under confined conditions; and

- The data indicate that the underlying organic clay strata effectively serve as a confining unit and that the underlying sand and silt formation is hydraulically isolated from the shallow water- bearing zone.

1.3 Description of Remedial Investigation Findings

The SMP and all Site documents, including the RIRA and RAW, are maintained by the NYSDEC (or successor agency). At the time of publication, these reports could be found at the Region 2 NYSDEC offices in Long Island City, New York.

1.3.1 Summary of Remedial Investigation Findings

The following reports document the findings of several environmental site assessments and investigations conducted at the subject property, inclusive of OU-2:

- Phase I ESA of Kings Plaza Shopping Mall, Flatbush Avenue and Avenue U, Brooklyn, New York, prepared by Certified Engineering and Testing Company, Inc. on behalf of Alexander's, dated October 4, 1993;

- Contaminant Assessment (CA)/Site Investigation (SI), prepared by IVI on behalf of Rosenman & Colin, LLP, dated July 1997;

- Groundwater Monitoring Report Nos. 1 through 17, prepared by IVI on behalf of Vornado;

- Remedial Investigation Report (RIR)/RAW for the Former Presto Plastics Facility, Operable Unit No. 2, prepared by IVI, dated April 19, 2000;

- Remedial Investigation Report/Remedial Action Workplan (RI/RAW) for the Former Presto Plastics Facility, Operable Unit No. 2, prepared by IVI, dated August 15, 2001; and

- Progress Report Nos. 18 through 25, prepared by Excel on behalf of Vornado.

- Remedial Investigation Report Addendum, prepared by Excel on behalf of Vornado, dated November 2003.

- Remedial Action Workplan, prepared by Excel on behalf of Vornado, dated May 2005.

A summary of the information contained in the above-referenced documents has been provided in several historic reports, including Chapter 2.0 of the RIR/RAW for the Former Presto Plastics Facility, dated August 15, 2001, prepared by IVI on behalf of Vornado for submission to the NYSDEC and in the November 2003 RIRA prepared by Excel.

The July 1997 CA/SI Report, prepared by IVI, summarizes the results of an initial investigation of areas within the 55th Street access road, the areas surrounding the Shopping Mall, and the adjacent paved parking lot (OU-3). As outlined in the July 1997 CA/SI Report, the investigation conducted by IVI included the evaluation of groundwater quality through the installation of 13 monitoring wells (designated as MW-1 through MW-13) in the 55th Street access road and around the perimeter of the Shopping Mall.

The August 2001 RIR/RAW summarizes the results of an additional investigation of OU-2 soil and groundwater quality conducted by IVI from June 1999 through September 1999. Review of the August 2001 RIR/RAW indicates that five soil borings (designated B-1 through B-3, B-12, and B-19) were advanced in the immediate vicinity of OU-2 as shown on Figure 4. Analytical results of soil samples collected at depths between six to eight feet bgs indicated that there were no Volatile Organic Compounds (VOCs) detected at concentrations above the NYSDEC soil cleanup criteria in any of these five soil borings. The Semi-Volatile Organic Compound (SVOC) results indicated that several BN compounds were reported in soil boring B-19 at concentrations above the NYSDEC Track 2 SCOs. There were no elevated BN concentrations reported in samples collected from the other four soil borings.

As outlined in the November 2003 RIRA, review of the boring logs prepared by IVI for monitoring wells and soil borings advanced in the 55th Street access road during the RI indicate that fill material consisting of brown to gray, medium to coarse sand with wood, bricks, cinders, glass, cobbles, and shells is laterally extensive within 55th Street from the OU-2 Area at the northern end of the street to the south near the Mill Basin.

As part of the RI, IVI also collected groundwater samples from monitoring wells MW-4, MW-33, and MW-34 within the OU-2 Area. Analytical results indicated that Naphthalene and several BN compounds were reported at concentrations above the New York Groundwater Quality Criteria (NYGWQC). As documented in the November 2003 RIRA, the historic groundwater analytical results for the OU-2 monitoring wells, indicate that BNs are predominantly the only parameters historically reported in groundwater at OU-2 wells MW-4 and MW-33. Historic groundwater analytical results for VOCs and SVOCs are summarized in Tables 1 and 2, respectively.

Based on the elevated BN concentrations in soil and the composition of the fill, the fill meets the NYSDEC definition of contaminated historic fill (defined as non-native fill that was contaminated prior to emplacement; usually due to the presence of ash and cinders which can contribute BNs, metals, and other contaminants to the fill). Furthermore, the historic OU-2 groundwater analytical results were likely biased high due to elevated turbidity in the samples and the fact that NYSDEC-recommended low flow sampling techniques were not used.

In order to complete groundwater quality delineation and to confirm the most appropriate remedial action alternative, Excel conducted a focused soil and groundwater RI in OU-2 in late 2002 and 2003 to verify whether elevated BN concentrations historically reported in soil and groundwater in OU-2 are in fact attributed to historic fill. A summary of the June 2003 soil analytical results is provided in Table 3 and Figure 4. Groundwater analytical results are summarized in Tables 4 and 5 and shown on Figure 5.

As summarized in the November 2003 RIRA, Excel verified the existence of a layer of non-indigenous fill at the soil/water interface in OU-2 that contains concrete, brick, wood, glass, ash, and cinders and that the elevated BN concentrations and the composition of the fill meets the NYSDEC definition of contaminated historic fill.

Based on the focused RI findings, the BN concentrations in soil at levels above the NYSDEC soil cleanup criteria are attributable to the historic fill and are not reflective of a historic point source discharge from site operations as previously indicated by IVI. Since the historic fill is laterally extensive and treatment and/or removal of the historic fill is technically and economically unfeasible, remedial action in the form of EC with IC to address the contaminated historic fill for compliance with the requirements of the Technical Guidance is proposed for OU-2.

As also summarized in the November 2003 RIRA, the groundwater analytical data generated during two rounds of groundwater sampling and analysis using NYSDEC-recommended low flow sampling techniques indicated that only BNs were reported in groundwater at OU-2 at concentrations slightly above the NYGWQC. This data support the conclusion that the trace BN concentrations are associated with the historic fill and not a historic point source discharge therefore, no further action for groundwater in OU-2 is required.

1.4 Description of Remedial Actions

The remedial action for the Site includes establishment of Engineering Controls under an Environmental Easement as outlined in the November 2003 RIRA and May 2005 RAW. An electronic version of these two reports is provided in Appendix A.

1.4.1 Removal of Contaminated Materials

The NYSDEC approved remedial action for OU-2 did not include the removal of any contaminated materials.

1.4.2 Onsite and Offsite Treatment Systems (Not Applicable)

There are no onsite or offsite treatment systems associated with OU-2.

1.4.3 Residual Contamination

Residual contamination associated with historic fill within the Former Presto Plastics Area designated as OU-2. The elevated BN concentrations and the composition of the fill meet the NYSDEC definition of contaminated historic fill. The contaminants reported above NYSDEC soil cleanup criteria in historic fill within the area defined as OU-2 include the following compounds:

- Benzo(a)anthracene (maximum concentration of 33 mg/kg);
- Chrysene (maximum concentration of 34 mg/kg);
- Benzo(b)fluoranthene (maximum concentration of 26 mg/kg);
- Benzo(k)fluoranthene (maximum concentration of 29 mg/kg);
- Benzo(a)pyrene (maximum concentration of 32 mg/kg);

- Indeno(1,2,3-cd)pyrene (maximum concentration of 21 mg/kg); and
- Dibenz (a,h) anthracene (maximum concentration of 6.2 mg/kg).

The residual soil analytical results are summarized in Table 3 and on Figure 4. In addition, a survey map showing the top elevation of the residual contamination zone is provided in the Environmental Easement included as Appendix B.

Based on these data, EC, as well as IC in the form of an Environmental Easement are warranted.

1.4.4 Engineering and Institutional Controls

Since residual contamination is present at this Site, ECs and ICs will be implemented to protect public health and the environment in the future. The Controlled Property has two primary ECs. The ECs for the entire OU-2 area consists of the following:

- Asphalt pavement of the 55th Street roadway; and
- Concrete sidewalks adjacent to 55th Street.

ICs are required to implement, maintain and monitor these Engineering Controls. The Environmental Easement requires compliance with these Institutional Controls. These ICs consist of the following:

- All ECs must be operated and maintained as specified in this SMP;
- All ECs on the Controlled Property (the Site) must be inspected and certified at a frequency and in a manner defined in this SMP;
- Groundwater monitor wells must be protected and replaced as necessary to ensure continued functioning in the manner specified in this SMP; and
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP.

The Controlled Property has a series of ICs in the form of Site restrictions. Adherence to these ICs is required under the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in this SMP;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for the intended use;

- The Controlled Property may continue to be used for commercial use only, provided the long-term Engineering and Institutional Controls included in the SMP remain in use.

These EC/ICs should:

- Prevent ingestion/direct contact with soil and groundwater with contamination that exceed soil cleanup objectives and drinking water standards;
- Prevent ingestion/direct contact with contaminated soil; and
- Prevent inhalation of or exposure to contaminants volatilizing from contaminated soil.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 Introduction

2.1.1 General

A RAW dated May 2005 was previously prepared to outline the proposed remedial action to address elevated BN concentrations in soil and groundwater that are attributed to historic fill within the area defined as OU-2. The RAW was approved by the NYSDEC on August 15, 2005 for the Site's intended restricted commercial use.

The RAW provided a summary of the proposed remedial action for OU-2 that consists of ECs with an Environmental Easement to address the contaminated historic fill identified within the area defined as OU-2 as necessary for compliance with the Technical Guidance. The use of ECs and an Environmental Easement as the selected remedy for soil in OU-2 is fully protective of human health and the environment and will minimize the potential for direct contact with the underlying soil; restrict the use of the groundwater without pretreatment to render it to the usage standards; and prevent inhalation of or exposure to contaminants.

A thorough evaluation of remedial action alternatives for the contaminated historic fill within OU-2 was conducted prior to selection and design of the remedial action outlined in the May 2005 RAW. The purpose of this remedy selection was to identify and evaluate the most appropriate remedial action alternatives for the BN concentrations in soil within the area defined as OU-2. Consistent with NYSDEC Technical Guidance, the overall objective of the evaluation was to select remedial action alternatives that are protective of public health and the environment given the intended continued use of the Site as a commercial property and the nature and extent of the BN concentrations in soil.

The elevated BN concentrations and the composition of the fill meet the NYSDEC definition of contaminated historic fill. The contaminants reported above NYSDEC soil cleanup criteria in historic fill within the area defined as OU-2 are BNs.

In accordance with the Technical Guidance, the specific remedial action objectives (RAOs) for OU-2 include the following:

- Ensure that the contaminant concentrations in soil are protective for the proposed use of OU-2 as an asphalt-paved roadway and sidewalk for the adjacent Kings Plaza Shopping Center; and
- Minimize the potential for ingestion, direct contact, or inhalation of BN concentrations associated with the soil in OU-2.

Remedial action alternatives were evaluated based on the Site-specific conditions at and in the vicinity of OU-2. Since the historic fill is laterally extensive and treatment and/or removal of the historic fill is technically and economically unfeasible, remedial action in the form of ECs with an Environmental Easement is proposed for the area defined as OU-2 based on the following:

1. **Overall Protection of Public Health and the Environment:**

   a. The selected remedy will enable the Volunteer to achieve the project-specific RAOs through the elimination, reduction, and/or control of actual or potential risks posed by the impacted soil and shallow groundwater through restricting direct contact.

   b. The ECs established for OU-2 are already in place and in good condition therefore no potential risk of exposure to the impacted soil or shallow groundwater is associated with construction of the ECs.

   c. The Environmental Easement will ensure that the ECs remain protective of human health and the environment by controlling disturbances, alterations, improvements, and/or modifications to the ECs thereby limiting human exposure to the contaminants of concern that remain in the soil.

   d. Health and Safety and engineering measures will be taken during implementation of any construction activities within the ECs and Environmental Easement boundaries as further discussed in the Post-Remediation Management Plan provided in Chapter 3.0 of this SMP.

2. **Compliance with Standards, Criteria, and Guidance (SCGs):**

   a. The selected remedy is designed to restrict direct contact with contaminated historic fill that contains BN concentrations above the NYSDEC Track 2 SCO.

   b. Establishment of an Environmental Easement and ECs is an acceptable remedial action alternative in accordance with the NYSDEC Technical Guidance and is fully protective of human health and the environment under the conditions at the Site.

3. **Long-Term Effectiveness and Permanence:**

   a. The selected remedy will be effective over the long-term because the Environmental Easement and ECs are designed to restrict direct contact of soil. The Environmental Easement will include requirements for maintenance and annual inspection of the ECs to ensure that it remains protective of human health and the environment.

   b. The Environmental Easement will also include requirements to control disturbances, alterations, improvements, and/or modifications to the ECs that may be necessary in the future due to maintenance and/or improvements at the Site.

4. **Reduction of Toxicity, Mobility or Volume:**

   a. The selected remedy will restrict direct contact with the BNs and remain protective of human health and the environment.

b. The ECs will minimize the infiltration of rainwater through the unsaturated soil thus minimizing the potential for leaching of BNs to the shallow groundwater. The low solubility characteristics of the BNs also minimize the potential for transport of these contaminants.

5. **Short-Term Effectiveness:**

   a. ECs in OU-2 currently exist in the form of a portion of the asphalt-paved 55th Street access road and adjacent concrete sidewalk therefore no further construction or engineering measures are required.

   b. Health and Safety and engineering measures will be required during any future disturbances, alterations, improvements, and/or modifications to the ECs.

   c. There is currently no direct contact possible with soil and shallow groundwater in OU-2 due to the existence of the asphalt-paved 55th Street access road and adjacent concrete sidewalk.

   d. In addition, the Environmental Easement will include requirements to control future disturbances, alterations, improvements, and/or modifications to the ECs.

6. **Implementability:**

   a. Implementation of the selected remedy is technically and administratively feasible since the ECs in the form of a portion of the asphalt-paved 55th Street access road and concrete sidewalk currently exist, thus direct contact with the underlying soil and shallow groundwater is already restricted under the existing Site conditions.

   b. In addition, NYSDEC has been extremely responsive in the review of submitted environmental documents and plans and there are no permits or approvals that will require extensive application review periods.

Since residual contamination exists beneath the Site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

Engineering Controls consist of the following:

- a portion of existing asphalt-paved roadways, including a portion of 55th Street and the adjacent concrete sidewalk as shown on Figure 2.

- Registration of an environmental easement, including ICs, to prevent future exposure to any contamination remaining at the site. A copy of the Environmental Easement is provided in Appendix B.

2.1.2 Purpose

The purpose of this Plan is to provide:

- A description of all EC/ICs on the Site;
- The basic operation and intended role of each implemented EC/IC;
- A description of the key components of the ICs created as stated in the Environmental Easement;
- A description of the features that should be evaluated during each annual inspection and compliance certification period;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of this SMP for the safe handling of residual contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the Site remedy, as determined by the NYSDEC.

2.2 Engineering Control Components

Exposure to residual contaminated soil/fill is prevented by an engineered composite cover system comprised of an asphalt-covered road and concrete-covered sidewalks. Figure 3 shows the location of each cover type at the Site. A Soil Management Plan is outlined in Section 2.3.2 of this EC/IC Plan, and outlines the procedures required in the event the composite cover system and underlying residual contamination are disturbed. Issues related to maintenance of this cover are provided in the Monitoring Plan included in Section 3 of this SMP.

2.3 Institutional Controls Components

2.3.1 Institutional Controls

A series of Institutional Controls are required under the RAW to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to residual contamination by controlling disturbances of the subsurface contamination; and, (3) restrict the use of the Site to Commercial uses only. Adherence to these Institutional Controls on the Controlled Property is required under the Environmental Easement and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Easement by the Grantor and the Grantor's successors and assigns with all elements of this SMP;
- All Engineering Controls must be operated and maintained as specified in this SMP;

- A composite cover system consisting of the asphalt covered road and concrete covered sidewalks must be inspected, certified and maintained as required in this SMP;
- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defied in the SMP.
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP;
- On-Site environmental monitoring devices, including but not limited to groundwater monitor wells, must be protected and replaced as necessary in accordance with Section 5.6 of the NYSDEC Technical Guidance; and
- Engineering Controls may not be discontinued without an amendment or the extinguishment of this Environmental Easement.

The Site Controlled Property has a series of Institutional Controls in the form of Site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- an annual inspection of the Controlled Property will be conducted and an annual certification will be submitted to the Department by a New York State Licensed Professional Engineer, stating that long-term institutional and engineering controls have been properly monitored and maintained, in accordance with the SMP (including documentation of any repairs conducted since the prior certification); and
- the use of the groundwater underlying the Controlled Property for any purpose, including but not limited to, potable, process or irrigation water, is prohibited without the implementation of necessary water quality treatment as determined by the New York State Departments of Health and Environmental Conservation; and
- any proposed soil excavation or other activities on the property below the composite cover (consisting of asphalt, concrete or a minimum of two (2) feet of clean fill (meeting the Part 375 SCO calculated as the lower of the SCOs for Residential Use and for Protection of Groundwater, or for which specific approval was given by NYSDEC) requires prior notification to NYSDEC, in accordance with the SMP, and the excavated soil and construction waste water must be managed, characterized, and properly disposed of in accordance with the SMP; and
- single family housing, vegetable gardens, farming, schools and day care facilities are prohibited on the Controlled Property; and
- all Engineering Controls must be operated and maintained as specified in the SMP; and
- data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP.

2.3.2 Soil/Materials Management Plan

ECs are in-place for the intended future restricted commercial use of this Site and thus any future intrusive work that will disturb the residual contamination and modifications or repairs to the ECs will be performed in compliance with the SMP, which is included in this SMP. Intrusive construction work must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site and included in Appendix C and Appendix D, respectively. The HASP is the responsibility of the property owner and should be in compliance with DER-10 Technical Guide and 29 CFR 1910 and 1926, and all other applicable Federal, State and local regulations. Any intrusive construction work must be certified as compliant with the SMP and included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan. A Soil Management Plan is provided in Appendix E.

2.3.2.1 Soil Screening Methods

Visual and photoionization detector (PID) soil screening and assessment will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (Residual Contamination Zone). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the TSCM (COC).

Screening will be performed by qualified environmental professionals. Resumes will be provided in the Annual Site Management Report for all personnel conducting invasive work field screening (i.e. those representing the Remedial Engineer) for unknown contaminant sources during remediation and development work.

2.3.2.2 Stockpile Methods

Temporary onsite soil staging locations for soil excavated for remedial or development activities will be identified prior to start of excavation activities. The excavated soil will be temporarily staged in discrete piles on plastic sheeting, separated using hay bales, and will be covered with plastic sheeting to minimize generation of contaminated runoff and/or fugitive dust emissions. Whenever possible, soil will be stockpiled on asphalt pavement. Stockpile covers will be maintained for the duration of the staging period until the time the material in the stockpile is designated for offsite disposal or onsite reuse as subsurface fill.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Soil stockpiles will be continuously encircled with silt fences. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

A dedicated water truck equipped with a water cannon will be available on-Site for dust control. DEC will consider the use of specially designed devices that are self-contained and capable of providing misting for dust control. DEC approval must be obtained. If dust-free operations are not achieved with such devices, this exception will be revoked.

Each stockpile of excavated soil will be labeled with a numerical stockpile designation. Each stockpile will then be documented in a log book along with the date of excavation, the type of material in the stockpile, the Work Area from which the material was excavated, and the anticipated end-use for the material (e.g. onsite reuse as clean backfill or offsite disposal/recycling). This information will be used to track soil volumes generated for disposal and/or onsite re-use as well as to ensure compliance with regulatory limitations for onsite storage of excavated materials.

Stockpiles generated from remedial or development activities will be inspected once per week to ensure compliance with regulatory limitations.

2.3.2.3 Materials Excavation and Load Out

Soil designated for offsite disposal will either be loaded directly into roll-off containers and/or dump trailers for offsite recycling and/or disposal or it will be temporarily stockpiled onsite prior to off-loading, dependant upon the rate of excavated soil generation, turnaround time of roll-offs and/or dump trailers, and recycling/disposal facility daily capacity. All soil stockpiles will be managed in accordance with the procedures outlined in Section 2.3.2.2 above. All excavated soil will be managed in accordance with applicable Federal, State, and local regulations. A copy of the transportation and disposal documentation for all contaminated soil generated during the remedial action, including waste manifests, bills of lading, and/or certificates of recycling, will be provided to the NYSDEC.

Soil excavated from below the water table that cannot be adequately drained by staging against the open excavation sidewalls, will be temporarily staged on plastic sheeting to facilitate dewatering prior to loading for off-site transportation. The location of any temporary soil staging areas for this use will be determined in the field prior to the start of excavation activities. The temporary staging of excavated material will be conducted in accordance with the procedures outlined in Section 2.3.2.2 above.

The Remediation Engineer or a qualified environmental professional under his/her supervision will oversee all invasive work and the excavation and load-out of all excavated material. The owner of the Controlled Property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the Remedial Engineer. It will be determined whether a risk or impediment to the planned work under this

SMP is posed by utilities or easements on the Site. Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYS Department of Transportation (DOT) requirements (and all other applicable transportation requirements).A truck wash will be operated on-Site. The Remediation Engineer will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the remedial construction is complete. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking.

The Remedial Engineer will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

The Applicant and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The Remedial Engineer will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this SMP.

Mechanical processing of historical fill and contaminated soil on-Site is prohibited.

2.3.2.4 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

All trucks loaded with Site materials will exit the vicinity of the Site using only approved truck routes. These truck routes include entering and exiting the 55th Street Access Road via Avenue U and Flatbush Avenue.

Proposed in-bound and out-bound truck routes to the Site are shown in Figure 6. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site. Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

Queuing of trucks will be performed on-Site in order to minimize off-Site disturbance. Off-Site queuing will be prohibited.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the Site. Truck wash waters will be collected and disposed of off-Site in an appropriate manner.

2.3.2.5 Materials Disposal Off-Site

The disposal locations will be identified and reported to NYSDEC in the Annual Site Management Report.

The total quantity of material expected to be disposed off-Site will be reported to NYSDEC prior to performance of work. This will include quantity, breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc.

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval.

Material that does not meet Track 2 SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

The following documentation will be obtained and reported by the Remedial Engineer for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter from the Remedial Engineer or BCP Applicant to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation site in New York State. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for

the material being transported; and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material.

Non-hazardous historic fill and contaminated soils taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2

Historic fill and contaminated soils from the Site are prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the Site are considered by the Division of Solid & Hazardous Materials (DSHM) in NYSDEC to be Construction and Demolition (C/D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC Region 2 DSHM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as dictated by DSHM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on- Site or off- Site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

The Annual Site Management Report will include an accounting of the destination of all material removed from the Site during work performed under this plan, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the Annual Site Management Report.

Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the annual Site Management Report.

Hazardous wastes derived from on-Site will be stored, transported, and disposed of in full compliance with applicable local, State, and Federal regulations. Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, State and Federal regulations.

Waste characterization will be performed for off-Site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results and Quality Assurance (QA)/Quality Control (QC) will be reported in the Final Engineering Report (FER). All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

2.3.2.6 Materials Reuse On-Site

NYSDEC approval to reuse any excavated soil as subsurface fill onsite will be requested in advance of placement and no excavated soil will be reused onsite without prior NYSDEC approval. Soil excavated from the affected area that will not be reused as subgrade fill within the affected area shall be transported offsite for proper offsite disposal as outlined in Sections 2.3.2.4 and 2.3.2.5.

- Acceptable demolition material proposed for reuse on-Site, if any, will be sampled for asbestos.
- Concrete crushing or processing on-Site is prohibited.
- Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site is prohibited for reuse on-Site.
- Contaminated on-Site material, including historic fill and contaminated soil, removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Soil that is excavated and stockpiled from the area designated as OU-2 may be sampled and classified for reuse or disposal. For excavated soil/fill with visual evidence of contamination (i.e., staining or elevated PID measurements), one composite soil sample and a duplicate sample shall be collected for each 100 cubic yards of stockpiled soil/fill. For excavated soil/fill that does not exhibit visual evidence of contamination, one composite sample and a duplicate shall be collected for every 2,000 cubic yards of stockpiled soil with a minimum of one sample collected.

The composite sample will be collected from five locations within each stockpile and PID measurements will be recorded for each of the five locations. One grab sample will be collected from the individual location with the highest PID measurement. If none of the five sample locations exhibit PID measurements, one location will be selected at random. The composite sample will be analyzed by a NYSDOH ELAP-certified laboratory for pH (EPA Method 9045C), TCL SVOCs, pesticides, PCBs, TAL metals, and cyanide. The grab sample will be analyzed for TCL VOCs.

Soil/fill that has been characterized and found to meet the SCGs may be reused as subgrade backfill, if appropriate. If the analyses indicate that one or more parameters are reported above their respective SCGs, the soil may not be used as backfill onsite and additional analyses may be necessary to further classify the soil for disposal purposes. The soil that does not meet the SCGs will be properly characterized and properly disposed off-site at a licensed disposal facility. Stockpiled soil cannot be transported on or off-site until the analytical results are received.

Any soil that is designated for reuse based on the results of soil reuse sampling and analysis will be stockpiled on plastic and covered with plastic separately from contaminated soil. Soil stockpiles will be numbered numerically and recorded on a soil tracking form for the proper management of the soil stockpiles.

2.3.2.7 Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by NYCDEP.

Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-Site. Discharge of water generated during remedial construction to surface waters (i.e. a local pond, stream or river) is prohibited without a Sate Pollutant Discharge Elimination System (SPDES) permit.

2.3.2.8 Demarcation

After the completion of soil removal and any other invasive remedial activities and prior to backfilling, as necessary, a land survey will be performed by a New York State licensed surveyor. The survey will define the top elevation of residual contaminated soils. A physical demarcation layer, consisting of orange safety fencing material or equivalent material will be placed on this surface to provide a visual reference. This demarcation layer will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in this Site Management Plan.

The survey will measure the grade covered by the demarcation layer before the placement of cover soils, pavement and sub-soils, structures, or other materials. This survey and the demarcation layer placed on this grade surface will constitute a modification of the physical and written record of the upper surface of the 'Residuals Management Zone' in the Site Management Plan. A map showing the survey results will be included in the Annual Site Management Report and updates to the Site Management Plan.

2.3.2.9 Source and Quality of Backfill

All materials proposed for import onto the Site will be approved by the Remedial Engineer and will be in compliance with provisions in this SMP prior to receipt at the Site. Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site which include only material from a certified virgin source or material that has been tested at a frequency approved by the NYSDEC with no contaminant concentrations above the NYSDEC SCO for the Site. Non-compliant soils will not be imported onto the Site without prior approval by NYSDEC. Nothing in the approved SMP or its approval by NYSDEC should be construed as an approval for this purpose.

Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Nothing in this SMP should be construed as an approval for this purpose.

Solid waste will not be imported onto the Site. Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

Note also that use of any imported fill material is subject to advance approval by Vornado prior to delivery of the material to the site. Recycled concrete is not acceptable as fill material at or below the shallow groundwater.

2.3.2.10 Stormwater Pollution Prevention Plan

A Stormwater Pollution Prevention Plan that conforms to the requirements of NYSDEC Division of Water guidelines and NYS regulations is required prior to any disruption of the ECs within OU-2. The Stormwater Pollution Prevention Plan should include the following components as necessary and appropriate:

- Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.
- Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.
- All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.
- Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.
- Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
- Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

2.3.2.11 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during on-site development related construction, sampling will be performed on product, sediment and surrounding soils, etc. Chemical analytical work will be for full scan parameters (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs). These analyses will not be limited

to STARS parameters where tanks are identified without prior approval by NYSDEC. Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will be also included in daily and periodic electronic media reports.

2.3.2.12 Community Air Monitoring Plan

During any activities that compromise the integrity of the ECs, a CAMP will be implemented to provide for real-time monitoring at the perimeter of the Site. Based on the site-specific contaminants, real-time monitoring will be conducted for organic vapors and particulates (i.e. fugitive dust). Real-time air monitoring for organic vapors and particulates will be conducted at the downwind perimeter of the Site (equivalent to the Exclusion Zone boundaries) during implementation of any construction activities that compromise the integrity of the ECs.

The objectives of the CAMP are:

- To provide a measure of protection for the downwind community (i.e. potential offsite receptors, including residences and businesses and on-site workers not directly involved with the remediation work activities) from potential airborne contaminant releases as a direct result of maintenance and/or future improvement activities; and

- To confirm that work activities did not spread contamination off-site through the air.

The following subsections outline the proposed scope of the air monitoring for both organic vapors and particulates.

Organic Vapors: Organic vapors will be monitored at the downwind perimeter of the Site during all ground intrusive activities, including soil excavation, utility work, drilling, and backfill placement. Air monitoring will be conducted with a PID that will be calibrated daily prior to the start of work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. All air measurements will be recorded on a Community Air Monitoring Log provided in Appendix F.

The following outlines the action level guidelines for the organic vapor air monitoring data:

- In the unlikely event that the 15-minute running average total organic vapor concentration at the downwind perimeter of the Site (equivalent to the Exclusion Zone boundaries), or individual Work Area, exceeds five parts per million (ppm) above ambient background concentrations, work activities will be temporarily halted and air monitoring will continue. If the total VOC level readily decreases (per instantaneous readings) below five ppm over ambient background, work activities will resume with continued monitoring;

- If total organic vapor levels at the downward perimeter of the Site, or individual Work Area, persist at levels above five ppm over ambient background but less than 25 ppm, work activities will be halted, the source of the vapors identified, corrective actions taken to abate the emissions, and monitoring continued;

- Work activities will then resume if the 15-minute running average total organic vapor concentration is below five ppm in comparison to ambient background concentrations 200 feet downwind of the Site or Work Area, or half the distance to the nearest potential receptor or residential/commercial structure (whichever is less, but in no case less than 20 feet); and

- If the 15-minute total organic vapor concentration at the downward perimeter of the Site, or individual Work Area, exceeds 25 ppm, work activities will be discontinued.

As previously stated, all PID measurements will be recorded on the Daily Community Monitoring Plan Logs and will be available for review by NYSDEC or New York State Department of Health (NYSDOH) personnel upon request. After completion of the remediation, the Daily Community Air Monitoring Logs will be provided to the NYSDEC.

Particulates: Measures to minimize, or suppress, the generation of fugitive dust emissions will be implemented during ground intrusive activities that may generate fugitive dust, including placement of clean backfill. Particulate concentrations will be monitored on a continuous basis at the upwind and downwind perimeters of the Site using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and integrating over a 15-minute period for comparison to the airborne particulate action levels outlined below. In addition, fugitive dust migration will also be visually assessed for the duration of the remediation to aid in preventing the off-site migration of contaminated particulates.

The following outlines the action level guidelines for the particulate monitoring data:

- In the unlikely event that the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than the ambient background, or upwind perimeter levels, for the 15-minute period or if airborne dust is observed leaving the Site, or the Work Area, then additional dust suppression techniques will be utilized;

- Work will continue with the additional dust suppression techniques provided that the downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind levels and there is no visible dust migrating from the Site and/or individual Work Area;

- After implementation of the additional dust suppression techniques, if the downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind perimeter levels, work will be stopped and work activities will be re-evaluated; and

- Work will resume if the additional dust suppression measures effectively reduce the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind perimeter levels and prevent visible dust migration.

As previously stated, all particulate measurements will be recorded on the Daily Community Monitoring Plan Logs and will be available for review by NYSDEC or NYSDOH personnel upon request and the Daily Community Air Monitoring Logs will be provided to the NYSDEC in Annual Site Management Report. Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

2.3.2.13 Fugitive Dust, Soil Erosion Control, and VOC Vapor Mitigation

Fugitive dust, soil erosion, and generation of VOC vapors during excavation activities will be suppressed and/or controlled using a number of standard construction practices. The following measures will be utilized, as necessary and appropriate, during all subgrade excavation and soil and concrete screening, crushing, and handling activities to control the generation of dust, soil erosion, and VOC vapors during the remediation:

- Cover stockpiles of excavated soil with plastic after onsite activity ceases, as necessary and appropriate;
- Control the excavation size or number of excavations as needed to minimize exposed soil faces;
- Wet equipment and excavation faces during active construction;
- Apply water mist on truck and equipment routes and restrict vehicle speeds across areas of exposed soil or soil-covered asphalt to less than 10 miles per hour;
- Spray tap water on buckets during loading of soil prior to transport to staging or reuse areas and/or during loading for offsite disposal; and
- Dust suppression will be achieved though the use of a dedicated on-Site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-Site roads will be limited in total area to minimize the area required for water truck sprinkling.

As outlined in Section 2.3.2.11, a site-specific CAMP shall be implemented during any ground intrusive activities, including collection of real-time measurements of organic vapors and particulates and visual observations of dust generation.

If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the

Controlled Property owner's Remediation Engineer, who is responsible for certifying the Annual Site Management Report.

All necessary means will be employed to prevent on- and off-Site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-Site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

2.3.2.14 Other Nuisances

A plan will be developed and utilized by the contractor for all activities that compromise the integrity of the ECs and will conform, at a minimum, to NYCDEP noise control standards

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

2.4 Inspections and Notifications

2.4.1 Inspections

A comprehensive Site-wide inspection will be conducted annually. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If Site records are complete and up to date.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP. The reporting requirements are outlined in the Site Management Reporting Plan.

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

2.4.2.1 NYSDEC-acceptable Electronic Database

The following information is presented in Appendix G in an electronic database format:

- A Site summary;
- The name of the current Site owner and/or the remedial party implementing the SMP for the Site;
- The location of the Site;
- The current status of Site remedial activity;
- A copy of the Environmental Easement; and
- A contact name and phone number of a person knowledgeable about the Environmental Easement's requirements, in order for NYSDEC to obtain additional information, as necessary.

This information should be: 1) modified as conditions change; (2) revised in Appendix G of this document; and, (3) submitted to NYSDEC in the Annual Site Monitoring Report. Should the Environmental Easement be modified or terminated, the copy of the revised Environmental Easement will also be updated in this manner.

2.4.2.2 Non-Routine Notifications

Non-routine notifications are to be submitted by the property owner(s) to the NYSDEC on an as-needed basis for the following reasons:

- 60-day advance notice of any proposed changes in Site use that are consistent with the terms of the Brownfield Cleanup Agreement.
- 10-day advance notice of any proposed ground-intrusive activities.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other ECs and likewise any action taken to mitigate the damage or defect.

- Notice within 48-hours of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, including a summary of action taken and the impact to the environment and the public.

- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45-days and shall describe and document actions taken to restore the effectiveness of the ECs.

3.0 MONITORING PLAN

3.1 Introduction

3.1.1 General

This Monitoring Plan describes the measures for evaluating the performance and effectiveness of the implemented ECs in reducing or mitigating contamination at the Site. ECs at the Site include the existing asphalt-paved roadway and existing concrete sidewalks as engineered "caps" to minimize any future direct contact with residually contaminated soil. The lateral extent of the ECs is shown in Figure 3. This Monitoring Plan is subject to revision by NYSDEC.

3.1.2 Purpose

This Monitoring Plan describes the methods to be used for:

- Evaluating Site information periodically to confirm that the remedy continues to be effective as per the design; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Reporting requirements;
- Inspection and maintenance requirements for the ECs; and
- Annual inspection and certification.

3.2 Engineering Control System Monitoring

ECs at the Site include the existing asphalt-paved roadway and existing concrete sidewalks as engineered "caps" to minimize any future direct contact with residually contaminated soil. The lateral extent of the ECs is shown in Figure 3.

As previously outlined in Section 2.4.1, a comprehensive Site-wide inspection will be conducted annually. The inspection will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;

- Achievement of remedial performance criteria; and
- If Site records are complete and up to date.

At a minimum, visual inspections will be conducted on an annual basis to identify any breaches in the asphalt pavement or concrete, areas of differential settlement, cracking, pot-holes, or other conditions that might compromise the effectiveness of the ECs. An inspection checklist will be completed during each inspection and copies will be maintained by the Volunteer (Appendix H). The reporting requirements are outlined in the Site Management Reporting Plan.

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

Any necessary repairs will be made to the asphalt and concrete cap. Maintenance activities and/or repairs will include patching of potholes, filling and patching depressions, and sealing of cracks, if any. All repairs and restorations will be completed within 30 days of the inspection. A record of the ECs inspection and maintenance activities will be maintained by the Volunteer.

Inspection frequency is subject to change by NYSDEC and NYSDOH. Unscheduled inspections and/or sampling may take place when a suspected failure of the ECs has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Monitoring deliverables for the ECs are specified later in this Plan.

3.3 Groundwater Monitoring Program

Groundwater quality at OU-2 is associated with the historic fill documented within the area defined as OU-2. Since the historic fill material will remain in place under ECs as part of the proposed remedial action, groundwater quality is not expected to change over time therefore future monitoring is not warranted.

3.4 Site-wide Inspection

A Site-wide inspection will be performed annually. A Site-wide inspection will also be performed after all severe weather conditions or if an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs. During these inspections, an inspection form will be completed (Appendix H). The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General Site conditions at the time of the inspection;

- The Site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- Confirm that Site records are up to date.

3.5 Monitoring Quality Assurance/Quality Control (Not Applicable)

Since groundwater monitoring is not required as a component to this Site Management Plan, this section is not applicable.

3.6 Monitoring Reporting Requirements

Forms and any other information generated during regular inspections will be kept on file on-Site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Annual Site Management Report, as specified in the Reporting Plan of the SMP.

All inspection results will be reported to NYSDEC on an Annual basis in the Site Management Report. A report or letter will be prepared for submission subsequent to each annual inspection. The report (or letter) will include, at a minimum:

- Date of inspection;
- Personnel conducting inspection;
- Description of the activities performed;
- Copies of all field forms completed; and
- Any observations, conclusions, or recommendations.

Data will be reported in hard copy or digital format as determined by NYSDEC.

3.7 Certifications

Site inspections will take place as outlined above. Frequency of inspection is subject to change by NYSDEC. Inspection certification for all ICs and ECs will be submitted to NYSDEC on a calendar year basis and must be submitted by March 1 of the following year. A qualified environmental professional, as determined by NYSDEC, will perform inspection and certification. Further information on the certification requirements are outlined in the Reporting Plan of the SMP.

4.0 OPERATION AND MAINTENANCE PLAN

There are no mechanical components of the remedy selected for this Site therefore this section is not applicable.

5.0 SITE MANAGEMENT REPORTING PLAN

5.1 Introduction

An Annual Site Management Certification Report will be submitted to NYSDEC following the calendar year reporting period but by March 1. The Site Management Report will be prepared in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation requirements. This Site Management Reporting Plan and its requirements are subject to revision by NYSDEC.

This report will include the following:

- Identification of all required EC/ICs required by the RAW for the Site;
- An evaluation of the Engineering and Institutional Control Plan and the Monitoring Plan for adequacy in meeting remedial goals;
- Assessment of the continued effectiveness of all Institutional and Engineering Controls for the Site;
- Certification of the EC/ICs;
- Results of the required periodic Site Inspections; and
- All deliverables generated during the reporting period, as specified in Section 2 EC/IC Plan, Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan.

The Site Management Certification Reporting Plan is subject to NYSDEC revision.

5.2 Certification of Engineering and Institutional Controls

Information of EC/ICs can be found in the Engineering and Institutional Control Plan portion of the SMP. Inspection of the EC/ICs will occur at a frequency described in the Monitoring Plan. After the last inspection of the reporting period, a qualified environmental professional will sign and certify the document. The document will certify that:

- On-Site ECs/ICs are unchanged from the previous certification;
- They remain in-place and effective;
- Nothing has occurred that would impair the ability of the controls to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls;

- Access is available to the Site by NYSDEC and NYSDOH to evaluate continued maintenance of such controls; and
- Site usage is compliant with the Environmental Easement.

The signed certification will be included in the Annual Site Management Report.

5.3 Site Inspections

5.3.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in the Monitoring Plan of this SMP. At a minimum, a Site-wide inspection will be conducted:

- Annually;
- Whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs; or
- When a breakdown of the asphalt pavement or concrete surface occurs.

5.3.2 Inspection Forms, Sampling Data, and Maintenance Reports

A general Site-wide inspection form will be completed during the Site-wide inspection (see Appendix H). These forms are subject to NYSDEC revision.

All applicable inspection forms and other records (including all sampling data of any media at the Site generated for the Site during the calendar year will be included in the Annual Site Management Certification Report.

5.3.3 Evaluation of Records and Reporting

The results of the inspection and Site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- The Site remedy continues to be protective of public health and the environment and is performing as designed in the RAW and described in this SMP.

5.4 Site Management Report

The Site Management Certification Report will be submitted annually and will be submitted by March 1 of the calendar year following the reporting period. The report will include:

- EC/IC certification;
- All applicable inspection forms and other records generated for the Site during the reporting period;
- A Site evaluation, which will address the following:
    - The compliance of the remedy with the requirements of the Site-specific RAW;
    - The performance and effectiveness of the remedy;
    - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored; and
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan.
- A figure showing sampling and well locations, and significant analytical values at sampling locations; and
- Comments, conclusions, and recommendations, based on an evaluation of the information included in the report, regarding EC/ICs at the Site.

The Site Management Report will be submitted, in hard-copy format, to the Region 2 NYSDEC offices, located at 41-40 21st Street, Long Island City, New York, and in electronic format to NYSDEC and NYSDOH.

TABLES

TABLE 1
OU-2 HISTORIC GROUNDWATER ANALYTICAL RESULTS SUMMARY: VOCs
Kings Plaza Shopping Center
Brooklyn, New York
(Concentrations reported in µg/L)

PARAMETERS		Ben	Tol	Etb	o-Xyl	m+p-Xyl	IsoP	n-Prop	1,3,5-TMB	T-but	1,2,4-TMB	sec-B	IPT	N-but	Nap	MTBE	TBA	PET	DCE	cis-1,2 DCE	TCE	1,3-DCP	1,2-DCB	1,3-DCB	1,4-DCB	MC	1,2,4-TCB	VC	Total VOCs
NYSDEC Groundwater Quality Standard		0.7	5	5	5	5	5	5	5	5	5	5	5	5	10	10	---	---	5	5	5	5	3	3	3	5	5	2	--
Sampling Point	Sample Date																												
MW-4	11/9-10/1998	**2**	**19**	ND	ND	2	ND	ND	2	ND	5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30
	2/25/1999	0.49 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**15**	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.49
	6/10/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**50**	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50
	9/28-29/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	12/16-18/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	2/21-23/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23-25/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	8/29-30/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	12/19-21/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14-16/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	5/22-24/2001	**17**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17
	7/31-8/2/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	**24**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37
	11/27-29/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
MW-33	9/28-29/1999	ND	ND	**35**	**9.8**	**12**	ND	ND	3.2	ND	**9.3**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	69.3
	12/16-18/1999	ND	ND	**16**	**5.7**	**6**	ND	ND	ND	ND	**5.7**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.4
	2/21-23/2000	ND	ND	**8.1**	ND	2.8	ND	ND	ND	4.3	ND	ND	ND	ND	**900**	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	915.2
	5/23-25/2000	ND	ND	**6.3**	2.8	2.1	ND	ND	ND	ND	1.7	ND	ND	ND	2.3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.2
	8/29-30/2000	ND	ND	**5.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,300 D**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,305.2
	12/19-21/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14-16/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	5/22-24/2001	ND	ND	4.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**300 D**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	304.9
	7/31-8/2/2001	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	**28**	**350 D**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	380.3
	11/27-29/2001	ND	1.3	4.1	2.3	ND	ND	ND	1.1	ND	2.1	ND	ND	ND	**350 D**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	360.9
MW-34	9/28-29/1999	**3.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.4
	12/16-18/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**20**	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20
	2/21-23/2000	**3.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**37**	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40.6
	5/23-25/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	8/29-30/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12
	12/19-21/2000	ND	ND	ND	ND	2.9	ND	ND	ND	ND	ND	ND	ND	4.4	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	8.5
	3/14-16/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**43**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	43
	5/22-24/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.9
	7/31-8/2/2001	**3.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.6
	11/27-29/2001	**13**	**6.2**	**5.7**	**13**	**18**	ND	ND	ND	ND	2.6	ND	ND	ND	5.1	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63.6

KEY:
VOCs - Volatile Organic Compounds
µg/L - micrograms per liter
NYSDEC - New York State Department of Environmental Conservation
Ben - Benzene
Tol - Toluene
Etb - Ethylbenzene
o-Xyl - o-Xylenes
m,p-Xyl - m&p-Xylenes
Iso-p - Isopropylbenzene
n-Prop - n-Propylbenzene
1,3,5-TMB - 1,3,5-Trimethylbenzene
T-but - Tert-Butylbenzene
1,2,4-TMB - 1,2,4-Trimethylbenzene
sec-B - sec-Butylbenzene
IPT - Isopropyltoluene
N-but - n-Butylbenzene
Nap - Naphthalene
MTBE - Methyl Tertiary Butyl Ether

TBA - Tert-butyl alcohol
PET - p-ethyltoluene
DCE- 1,1 Dichloroethene
cis-1,2 DCE - cis 1,2 Dichloroethene
TCE - Trichloroethene
1,3 DCP - 1,3 Dichloropropane
1,2-DCB - 1,2-Dichlorobenzene
1,3-DCB- 1,3-Dichlorobenzene
1,4-DCB- 1,4-Dichlorobenzene
MC - Methylene Chloride
1,2,4-TCB - 1,2,4 Trichlorobenzene
VC - Vinyl Chloride
ND - Not Detected at MDL below NYSDEC Groundwater Quality Standard
NA - Not Analyzed
FP - Not Analyzed due to the presence of Free Product
NP - Data Not Provided

J - Estimated Concentration, Compound Detected but at Concentration Below MDL
D - Diluted Sample
U - Undetected at MDL
MDL - Method Detection Limit

NOTES:
Values in **Bold** exceed NYSDEC Groundwater Quality Standard.

TABLE 2
OU-2 HISTORIC GROUNDWATER ANALYTICAL RESULTS SUMMARY: SVOCs
Kings Plaza Shopping Center
Brooklyn, New York
(Concentrations reported in µg/L)

PARAMETERS		Nap	2-Mnap	Acn	Flu	Phe	Ant	Flo	Pyr	Di-ETH	Di-Meth	Di-n-OCT	Di-n-b	BbP	BisEP	DBf	Car	Acy	DiMP	B (g,h,I)	B(a)A	B(b)F	B(k)F	B(a)P	Inden	Chry	TOTAL BNAs
NYSDEC Groundwater Quality Standard		10	50	20	50	50	50	50	50	50	50	50	50	50	50	---	---	---	5	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	
Sampling Point	Sample Date																										
MW-4	11/9-10/1998	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
	2/25/1999	ND	NA	37	0.97 J	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.97
	6/10-11/1999	ND	1 J	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33
	9/28-29/1999	ND	1.4	31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32.4
	12/16-18/1999	ND	1.6	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	41.6
	2/21-23/2000	ND	ND	11	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.2
	5/23-25/2000	ND	ND	31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31
	8/29-30/2000	ND	ND	31	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32.2
	12/19-21/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14-16/2001	ND	ND	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 J	ND	ND	8.9 J	ND	ND	ND	ND	ND	ND	ND	ND	34.9
	5/22-24/2001	240 D	15	120 D	65	59	8.2 J	10	4.8 J	21	1.4 J	ND	19	1.3 J	4.5	57	NA	4.3 J	NA	ND	ND	ND	ND	ND	ND	ND	630.5
	7/31-8/1&2/2001	ND	ND	31	ND	ND	ND	ND	ND	9.5 J	ND	ND	ND	ND	3 J	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	43.5
	11/27-29/2001	ND	ND	35	1.2 J	4.2 J	1.3 J	3.6 J	2.5 J	ND	ND	ND	1.2 J	ND	5.4 J	ND	NA	12	NA	ND	1.1 J	ND	1.3 J	ND	ND	1.3 J	70.1
MW-33	9/28-29/1999	640 E	87 E	180 E	93 E	110 E	16	13	7.4	ND	ND	ND	ND	ND	1.5	87 E	ND	5.4	ND	ND	ND	ND	ND	ND	ND	ND	1240.3
	12/16-18/1999	840 D	65 D	200 D	89 D	76 D	73 D	ND	ND	ND	ND	ND	ND	ND	ND	75 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1418
	2/21-23/2000	46	6.4	35	22	18	3.2	2.5	1.6	1	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	152.7
	5/23-25/2000	ND	ND	87	21	9.9 J	3.1 J	3.2 J	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	126.2
	8/29-30/2000	380 D	52	160 D	67	67	86 J	6.1	2.6 J	ND	ND	ND	1.7 J	ND	ND	57	ND	4.3 J	17	ND	ND	ND	ND	ND	ND	ND	900.7
	12/19-21/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14-16/2001	260 D	36	120 D	61	46	6 J	6 J	3.4 J	ND	ND	ND	ND	ND	2.6 J	47	45	3.6 J	ND	ND	ND	ND	ND	ND	ND	ND	636.6
	5/22-24/2001	ND	1.6 J	35	ND	ND	ND	ND	ND	19	ND	ND	14	ND	1.7	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	71.3
	7/31-8/1&2/2001	230 D	11	160 D	67	57	63 J	5.3 J	ND	ND	ND	ND	ND	ND	4 J	57	NA	3.5 J	NA	ND	ND	ND	ND	ND	ND	ND	657.8
	11/27-29/2001	380 D	41	210 D	74	72	9.9 J	12	5.7 J	ND	ND	ND	2.3 J	ND	1.7 J	67	NA	4.9 J	NA	ND	ND	ND	ND	ND	ND	ND	880.5
MW-34	9/28-29/1999	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
	12/16-18/1999	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5
	2/21-23/2000	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
	5/23-25/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
	8/29-30/2000	ND	ND	1.4 J	ND	ND	ND	ND	ND	1.1 J	ND	ND	3.6 J	1.1 J	6.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.1
	12/19-21/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 J	2 J	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6
	3/14-16/2001	5.8 J	ND	6 J	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3 J	2.4 J	2.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.8
	5/22-24/2001	ND	1 J	3.6 J	ND	ND	ND	ND	ND	22	1.2 J	ND	17	ND	4 J	1.1 J	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	49.9
	7/31-8/1&2/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND -	ND	ND	ND	3.6 J	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	3.6
	11/27-29/2001	4 J	ND	1.9 J	ND	2 J	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	9.1

KEY:

µg/L - micrograms per liter
NYSDEC - New York State Department of Environmental Conservation
Nap - Napthalene
2-Mnap - 2-Methylnaphthalene
Acn - Acenaphthene
Flu - Fluorene
Phe - Phenanthrene
Ant - Anthracene
Flo - Fluoranthene
Pyr - Pyrene
Di-ETH - Di-ethylphthalate
Di-Meth - Di-methylphthalate
Di-n-OCT - Di-n-Octylphthalate
Di-n-b - Di-n-butylphthalate
BbP - Butylbenzyl phthalate
BisEP - Bis(2-ethyl-hexyl)phthalate
DBf - Dibenzofuran
Car - Carbazole
Acy - Acenaphthylene
DiMP - 2,4 Dimethylphenol
B (g,h,I) - Benzo (g,h,I) Pyrene
B(a)A - Benzo (a) Anthracene
B(b)F - Benzo (b) Fluoranthene
B(k)F - Benzo (k) Fluoranthene
B(a)P - Benzo (a) Pyrene
Inden - Indeno (1,2,3-cd) Pyrene
Chry - Chrysene
ND - Not Detected
NA - Not Analyzed
FP - Not Sampled due to the presence of free product
NS - Not Sampled

NOTES:

J - Indicates that concentration was detected at a value below the minimum detection limit.
U - Indicates that the sample was undetected.
D - Indicates that the concentration was based on a diluted sample analysis.
E - Indicates that the compound exceeded the laboratories calibration curve for the sample.
Bold - Indicates an exceedance of the NYDEC GWQC.
* 0.002 or Practical Quantitation Limit (PQL), which is the lowest level that can be reliably detected in the laboratory.

TABLE 3
JUNE 2003 SOIL ANALYTICAL RESULTS: PAHs
Kings Plaza Shopping Center
Brooklyn, New York
(Concentrations reported in mg/kg)

PARAMETERS		Nap	Acy	Acn	Flu	Phe	Ant	Flo	Pyr	BaA	Chr	BbF	BkF	BaP	IP	DbA	BP	Total PAHs
PROPOSED NYSDEC TRACK 2-RESTRICTED USE SOIL CLEANUP OBJECTIVES	RESTRICTED COMMERCIAL	500	500	500	500	500	500	500	500	5.6	56	6	56	1	5.6	0.56	500	---
	PROTECTION OF ECOLOGICAL RESOURCES	---	---	20	30	---	---	---	---	---	---	---	---	2.6	---	---	---	---
	PROTECTION OF GROUNDWATER	12	107	98	386	1,000	1,000	1,000	1,000	1	1	1.7	1.7	22	8.2	1,000	1,000	---

Excel Sample No.	Lab Sample No.	Sample Depth	Sample Matrix	Collection Date	Collection Time															
B3A	439634	5.5 - 6.0	Soil	6/30/2003	1150	0.29 J	0.12 J	1.30 J	0.98 J	9.6	3.9	24	28	11	12	8	11	11	7.2	2.6	8.4	139.39
B12A	439636	5.5 - 6.0	Soil	6/30/2003	1105	0.96 J	0.34 J	3.20 J	4.40 J	52	15	76	81	33	34	26	29	32	21	6.2	23	437.1
B19A	439638	5.5 - 6.0	Soil	6/30/2003	1020	0.22 J	0.049 J	2.5	0.82	5.8	2.4	12	13	3	3	1.6	2.4	2.3	1.3	0.48	1.4	52.27
FB	439640	---	Aq	6/30/2003	1230	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

KEY:
mg/kg - milligrams per kilogram
Nap - Naphthalene
Acy - Acenaphthylene
Acn - Acenaphthene
Flu - Fluorene
Phe - Phenanthrene
Ant - Anthracene
Flo - Fluoranthene
Pyr - Pyrene
BaA - Benzo(a)anthracene
Chr - Chrysene
BbF - Benzo(b)fluoranthene
BkF - Benzo(k)fluoranthene
BaP - Benzo(a)pyrene
IP - Indeno(1,2,3-cd)pyrene
DbA - Dibenz (a,h) anthracene
BP - Benzo (g,h,i) perylene
PAHs - Polynuclear Aromatic Hydrocarbons
ND - Not Detected Above Method Detection Limits
Aq - Aqueous

NOTES:
Samples denoted in Military Time.
Sample depths are reported in feet (ft.) below ground surface.
Bold and Shaded values exceed NYSDEC Recommended Soil Clean-up Objective.

TABLE 4
SUMMARY OF OU-2 QUARTERLY GROUNDWATER ANALYTICAL RESULTS:
VOLATILE ORGANIC COMPOUNDS
Kings Plaza Shopping Center
Brooklyn, New York
NYSDEC VCA No. A2-0403-9911
(Concentrations reported in ug/l)

PARAMETERS					MTBE	Ben	Tol	Etb	Total Xyl	PCE	TCE	c-DCE	t-DCE	1,1-DCE	VC	Chf	Nap	Iso-p	t-Ben	n-Ben	Sec-B	Total VOCs
NEW YORK STATE AMBIENT WATER QUALITY STANDARDS					10	1	5[1]	5[1]	5[1]	5[1]	5[1]	5[1]	5[1]	5	2	7	10	5	---	5	5	---
Excel Sample No.	Sample Matrix	Lab Sample No.	Collection Date	Collection Time																		
MW-4[3]	Aq	377678	9/19/2002	1625	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-33[3]	Aq	377679	9/19/2002	1645	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-34[3]	Aq	377680	9/19/2002	1355	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-45[3]	Aq	377681	9/19/2002	0955	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-46[3]	Aq	377682	9/19/2002	1225	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	**32**	ND	ND	ND	ND	32
FB[3]	Aq	377683	9/19/2002	1655	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
TB[3]	Aq	377684	9/18/2002	---	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-33[3]	Aq	379626	9/26/2002	1100	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	**150**	ND	ND	ND	ND	150
FB[3]	Aq	379627	9/26/2002	1115	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
TB[3]	Aq	379628	9/26/2002	---	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
MW-4[4]	Aq	444180	7/17/2003	0940	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND
MW-33[4]	Aq	444186	7/18/2003	0925	NA	ND	ND	ND	ND	2.3	3.4	**9.1**	ND	ND	1.8 J	ND	NA	NA	NA	NA	NA	16.6
MW-34[4]	Aq	444181	7/17/2003	1110	NA	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	ND	ND	NA	NA	NA	NA	NA	1.4
MW-45[4]	Aq	444182	7/17/2003	0815	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND
MW-46[4]	Aq	444178	7/17/2003	0900	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND
MW-33[4]	Aq	452825	8/18/2003	0935	NA	ND	ND	ND	ND	ND	ND	1.8 J	ND	ND	0.8 J	ND	NA	NA	NA	NA	NA	2.6
FB-1[4]	Aq	444189	7/18/2003	1100	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND
FB	Aq	452826	8/18/2003	0945	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TB-1[4]	Aq	444190	7/16/2003	---	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND

KEY:

ug/l - micrograms per liter
VOCs - Volatile Organic Compounds
MTBE - Methyl Tertiary Butyl Ether
Ben - Benzene
Tol - Toluene
Etb - Ethylbenzene
Total Xyl - Total Xylene
PCE - Tetrachloroethene
TCE - Trichloroethene
c-DCE - cis-1,2 - Dichloroethene
t-DCE - trans - 1,2 - Dichloroethene
1,1-DCE - 1,1-Dichloroethene
VC - Vinyl Chloride
Chf - Chloroform
Nap - Naphthalene
Iso-p - Isopropyl benzene
t-Ben - tert-Butylbenzene
n-Ben - n-Propylbenezene
Sec-B - sec-Butylbenzene
Aq - Aqueous
ND - Not Detected Above Method Detection Levels
NA - Not Analyzed
D - Indicates sample dilution

NOTES:

Sample times denoted in military time.
Guidance values may be used where a standard for a substance or group of substances has not been established for a particular water class and type of value.
Bold and Shaded - Indicates an exceedance of the New York Groundwater Quality Criteria.
(1) - The compound is included in a principal organic contaminant (POC) list and therefore the POC general standard for groundwater is used.
(2) - Method Detection Level exceeds New York State Ambient Water Quality Standards due to high sample dilution.
(3) - Indicates sample was analyzed by Method 8021B.
(4) - Indicates sample was analyzed by Method 8260B.

TABLE 5
SUMMARY OF OU-2 QUARTERLY GROUNDWATER ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS
Kings Plaza Shopping Center
Brooklyn, New York
NYSDEC VCA No. A2-0403-9911
(Concentrations reported in ug/l)

PARAMETERS					Nap	Acn	Flu	Phe	Ant	Flo	Pyr	B(a)A	Chr	BeP	B(b)F	B(k)F	B(a)P	Inden	Dibenz	Ben (g,h,I)	Total SVOCs
NEW YORK STATE AMBIENT WATER QUALITY STANDARDS					10	20	50	50	50	50	50	0.002	0.002	5	0.002	0.002	0.002	0.002	50	5*	---
Excel Sample No.	Sample Matrix	Lab Sample No.	Collection Date	Collection Time																	
MW-4	Aq	377678	9/19/2003	1625	1.0 J	**33**	1.1 J	1.5 J	0.3 J	1.0 J	0.6 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	38.5
MW-33	Aq	377679	9/19/2003	1645	**250**	**220**	**160**	**160**	19 J	20 J	10 J	**1.3 J**	**0.6 J**	NA	ND	ND	ND	ND	ND	ND	840.9
MW-34	Aq	377680	9/19/2003	1355	ND	5.1 J	ND	ND	ND	0.3 J	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	5.4
MW-45	Aq	377681	9/19/2003	0955	ND	0.8 J	ND	0.3 J	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	1.1
MW-46	Aq	377682	9/19/2003	1225	ND	1.5 J	0.2 J	ND	ND	0.3 J	0.4 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	2.4
FB	Aq	377683	9/19/2002	1655	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
MW-4	Aq	444180	7/17/2003	0940	0.2 J	**29**	0.5 J	2.4 J	0.5 J	8.1 J	6.6 J	**3.6**	**5.3 J**	NA	**4.5**	**5**	**4.9**	**3.3**	ND	3.8 J	77.7
MW-33	Aq	444186	7/18/2003	0925	**21**	**44**	23	25	3.2 J	3.1 J	1.5 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	120.8
MW-34	Aq	444181	7/17/2003	1110	1.0 J	4.7 J	1.1 J	1.0 J	ND	0.4 J	0.3 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	8.5
MW-45	Aq	444182	7/17/2003	0815	ND	0.8 J	ND	ND	ND	0.3 J	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	1.1
MW-46	Aq	444178	7/17/2003	0900	3.4 J	2.4 J	1.2 J	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	7
MW-33	Aq	452825	8/18/2003	0935	**11**	**43**	21	26	3.4 J	2.8 J	1.4 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	108.6
FB	Aq	444189	7/18/2003	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FB	Aq	452826	8/18/2003	0945	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND

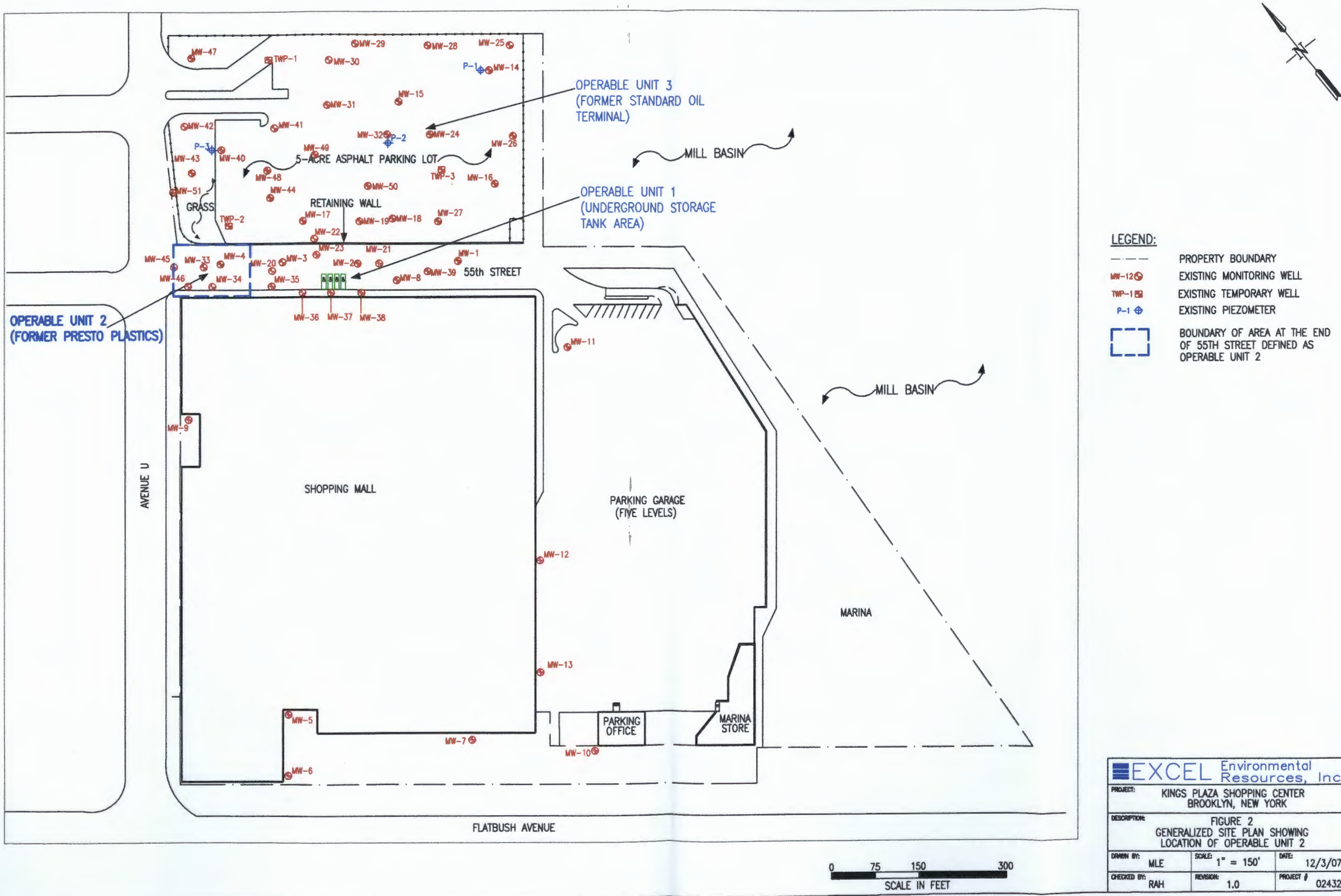
KEY:
ug/l - micrograms per liter
SVOCs - Semi Volatile Organic Compounds
Nap - Naphthalene
Acn - Acenaphthene
Flu - Fluorene
Phe - Phenanthrene
Ant - Anthracene
Flo - Fluoranthene
Pyr - Pyrene
B(a)A - Benzo(a)anthracene
Chr - Chrysene
BeP - bis(2-Ethylhexyl)phthalate
B(b)F - Benzo(b)fluoranthene
B(k)F - Benzo(k)fluoranthene
B(a)P - Benzo(a)pyrene
Inden - Indeno(1,2,3-cd)pyrene
Dibenz - Dibenz(a,h)anthracene
Ben(g,h,I) - Benzo(g,h,I)perylene
Aq - Aqueous
ND - Not Detected
NA - Not Analyzed

NOTES:
Sample times denoted in military time.
Guidance values may be used where a standard for a substance or group of substances has not been established for a particular water class and type of value.
Bold and Shaded - Indicates an exceedance of the New York Groundwater Quality Criteria.
* - The compound is included in a principal organic contaminant (POC) list and therefore the POC general standard for groundwater is used.
J - The result is less than the specified quantation limit but greater than zero. The concentration given is an approximate value.

FIGURES

SOURCE:
UNITED STATES GEOLOGICAL SURVEY
7.5 MINUTE SERIES (TOPOGRAPHIC)
CONEY ISLAND, NY QUADRANGLE
1995

EXCEL ENVIRONMENTAL RESOURCES, INC.		
KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK		
FIGURE 1 SITE LOCATION MAP		
DRAWN BY: NA	SCALE: 1:24,000	10/17/2003
CHECKED BY: EM	REVISION: 2.0	PROJECT #: 02432

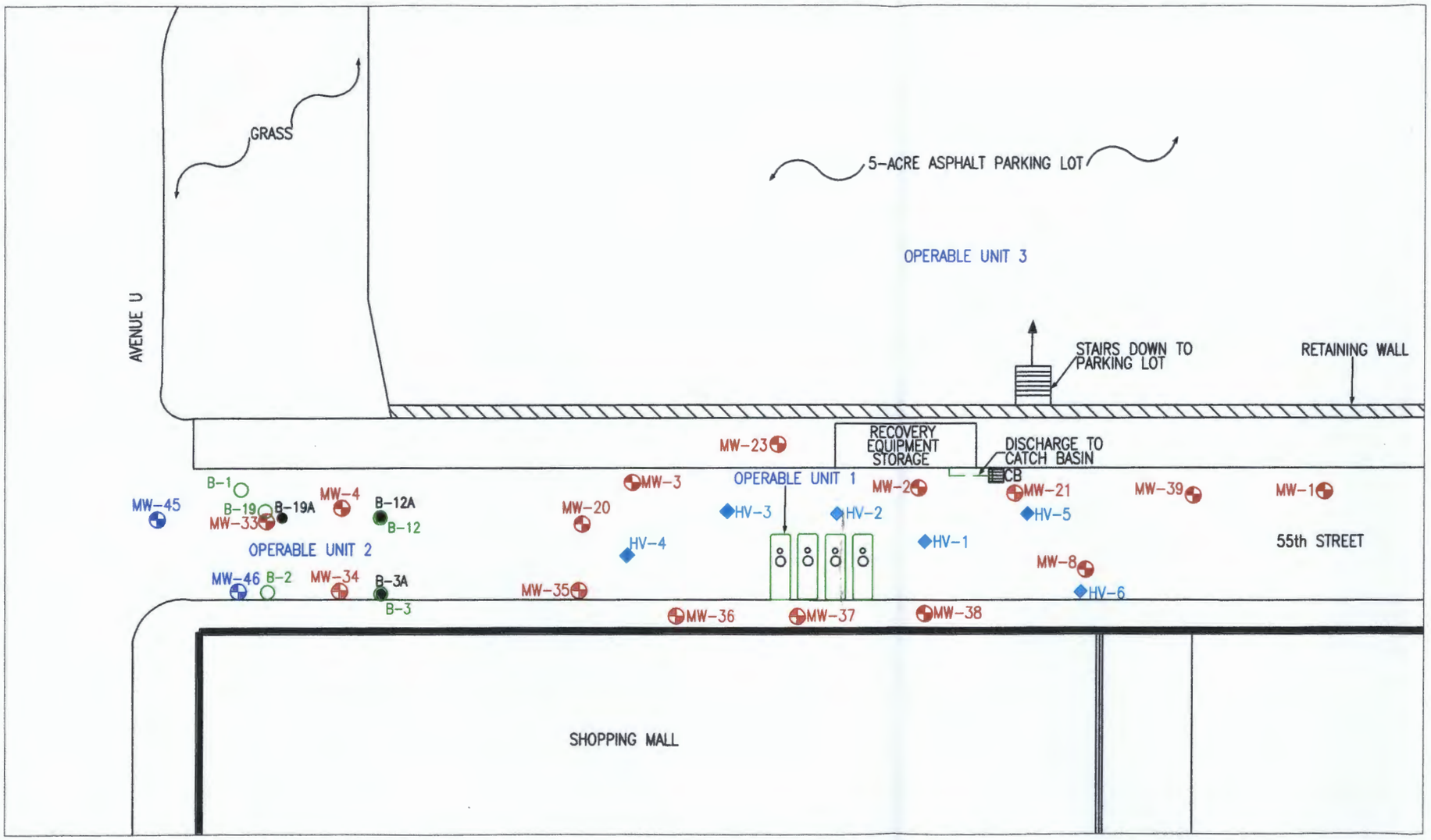


EXCEL Environmental Resources, Inc.

PROJECT:	KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 2 GENERALIZED SITE PLAN SHOWING LOCATION OF OPERABLE UNIT 2

DRAWN BY: MLE	SCALE: 1" = 150'	DATE: 12/3/07
CHECKED BY: RAH	REVISION: 1.0	PROJECT #: 02432

G:\02432-OU 2\FIGURES\FIGURE 3.dwg



LEGEND:

MW-1	MONITORING WELL
MW-45	NEW MONITORING WELL
HV-6	HVDPE WELL
B-12	FORMER SOIL BORING CONDUCTED BY M
B-3A	SOIL BORING CONDUCTED BY EXCEL IN JUNE 2003
	DISCHARGE PIPE
CB	CATCH BASIN
	EXISTING UNDERGROUND STORAGE TANK

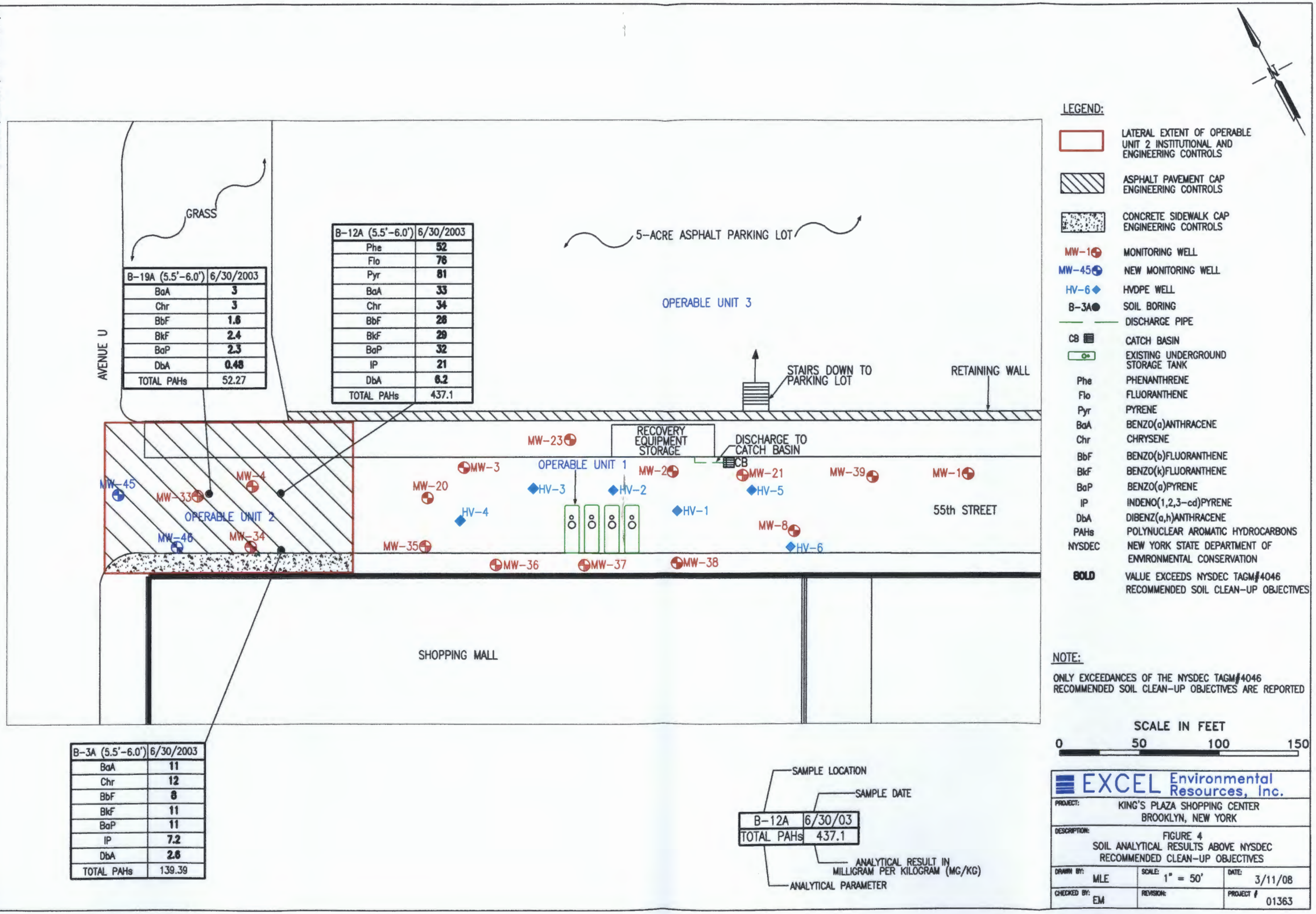
SCALE IN FEET

0 50 100 150

EXCEL Environmental Resources, Inc.

PROJECT:	KING'S PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 3 SITE PLAN SHOWING SOIL BORING AND MONITORING WELL LOCATIONS
DRAWN BY: MLE	SCALE: 1" = 50'
DATE: 8/13/02	
CHECKED BY: EM	REVISION:
PROJECT # 01363	

G:\02432-OU 2\FIGURES\FIGURE 4.dwg



B-19A (5.5'-6.0')	6/30/2003
BaA	3
Chr	3
BbF	1.8
BkF	2.4
BaP	2.3
DbA	0.48
TOTAL PAHs	52.27

B-12A (5.5'-6.0')	6/30/2003
Phe	52
Flo	76
Pyr	81
BaA	33
Chr	34
BbF	28
BkF	29
BaP	32
IP	21
DbA	6.2
TOTAL PAHs	437.1

B-3A (5.5'-6.0')	6/30/2003
BaA	11
Chr	12
BbF	8
BkF	11
BaP	11
IP	7.2
DbA	2.6
TOTAL PAHs	139.39

LEGEND:

- LATERAL EXTENT OF OPERABLE UNIT 2 INSTITUTIONAL AND ENGINEERING CONTROLS
- ASPHALT PAVEMENT CAP ENGINEERING CONTROLS
- CONCRETE SIDEWALK CAP ENGINEERING CONTROLS
- MW-1 MONITORING WELL
- MW-45 NEW MONITORING WELL
- HV-6 HVDPE WELL
- B-3A SOIL BORING
- DISCHARGE PIPE
- CB CATCH BASIN
- EXISTING UNDERGROUND STORAGE TANK
- Phe PHENANTHRENE
- Flo FLUORANTHENE
- Pyr PYRENE
- BaA BENZO(a)ANTHRACENE
- Chr CHRYSENE
- BbF BENZO(b)FLUORANTHENE
- BkF BENZO(k)FLUORANTHENE
- BaP BENZO(a)PYRENE
- IP INDENO(1,2,3-cd)PYRENE
- DbA DIBENZ(a,h)ANTHRACENE
- PAHs POLYNUCLEAR AROMATIC HYDROCARBONS
- NYSDEC NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
- **BOLD** VALUE EXCEEDS NYSDEC TAGM#4046 RECOMMENDED SOIL CLEAN-UP OBJECTIVES

NOTE:

ONLY EXCEEDANCES OF THE NYSDEC TAGM#4046 RECOMMENDED SOIL CLEAN-UP OBJECTIVES ARE REPORTED

SCALE IN FEET

0 50 100 150

B-12A	6/30/03
TOTAL PAHs	437.1

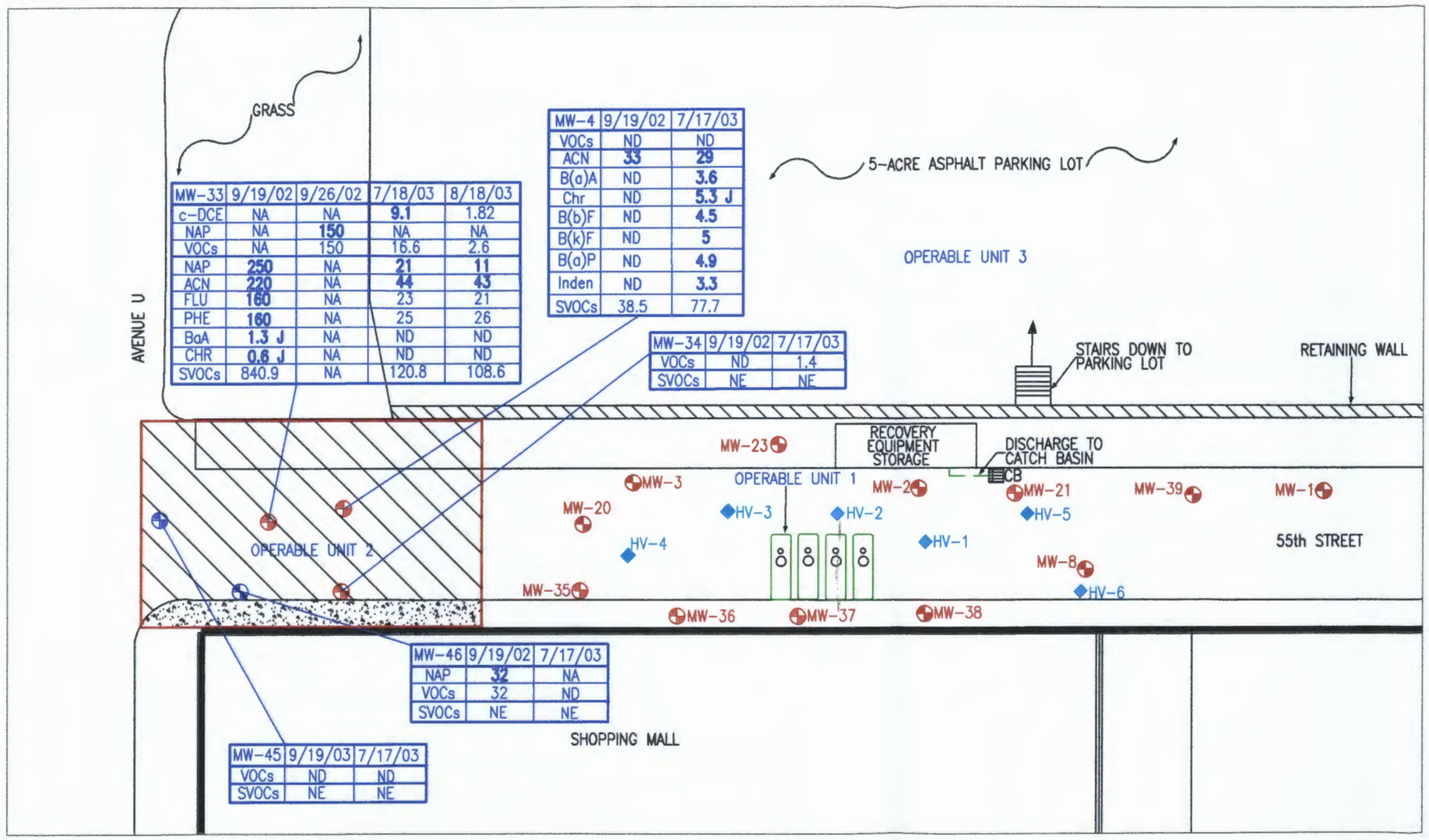
- SAMPLE LOCATION
- SAMPLE DATE
- ANALYTICAL RESULT IN MILLIGRAM PER KILOGRAM (MG/KG)
- ANALYTICAL PARAMETER

EXCEL Environmental Resources, Inc.

PROJECT:	KING'S PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 4 SOIL ANALYTICAL RESULTS ABOVE NYSDEC RECOMMENDED CLEAN-UP OBJECTIVES

DRAWN BY:	SCALE:	DATE:
MLE	1" = 50'	3/11/08
CHECKED BY: EM	REVISION:	PROJECT # 01363

K:\Projects\02432 OU-2\figures\FIGURE 5.dwg



MW-33	9/19/02	9/26/02	7/18/03	8/18/03
c-DCE	NA	NA	**9.1**	1.82
NAP	NA	**150**	NA	NA
VOCs	NA	150	16.6	2.6
NAP	**250**	NA	**21**	**11**
ACN	**220**	NA	**44**	**43**
FLU	**160**	NA	23	21
PHE	**160**	NA	25	26
BaA	**1.3 J**	NA	ND	ND
CHR	**0.6 J**	NA	ND	ND
SVOCs	840.9	NA	120.8	108.6

MW-4	9/19/02	7/17/03
VOCs	ND	ND
ACN	**33**	**29**
B(a)A	ND	**3.6**
Chr	ND	**5.3 J**
B(b)F	ND	**4.5**
B(k)F	ND	**5**
B(a)P	ND	**4.9**
Inden	ND	**3.3**
SVOCs	38.5	77.7

MW-34	9/19/02	7/17/03
VOCs	ND	1.4
SVOCs	NE	NE

MW-46	9/19/02	7/17/03
NAP	**32**	NA
VOCs	32	ND
SVOCs	NE	NE

MW-45	9/19/03	7/17/03
VOCs	ND	ND
SVOCs	NE	NE

LEGEND:

- LATERAL EXTENT OF OPERABLE UNIT 2 INSTITUTIONAL AND ENGINEERING CONTROLS
- ASPHALT PAVEMENT CAP ENGINEERING CONTROLS
- CONCRETE SIDEWALK CAP ENGINEERING CONTROLS
- MW-1 MONITORING WELL
- MW-45 NEW MONITORING WELL
- HV-6 HVDPE WELL
- DISCHARGE PIPE
- CB CATCH BASIN
- EXISTING UNDERGROUND STORAGE TANK
- c-DCE cis-1,2-DICHLOROETHENE
- VOCs TOTAL VOLATILE ORGANIC COMPOUNDS
- NAP NAPHTHALENE
- ACN ACENAPHTHENE
- B(a)A BENZO(a)ANTHRACENE
- Chr CHRYSENE
- B(b)F BENZO(b)FLUORANTHENE
- B(k)F BENZO(k)FLUORANTHENE
- B(a)P BENZO(a)PYRENE
- Inden INDENO(1,2,3-cd)PYRENE
- SVOCs TOTAL SEMI VOLATILE ORGANIC COMPOUNDS
- ND NOT DETECTED
- NA NOT ANALYZED
- NE NO EXCEEDANCE OF THE NEW YORK STATE AMBIENT WATER QUALITY STANDARD OR GUIDANCE VALUE
- **BOLD** VALUE EXCEEDS NEW YORK STATE GROUNDWATER QUALITY CRITERIA
- J RESULT IS LESS THAN QUANTITATION LIMIT AND IS AN APPROXIMATE VALUE

NOTE:

ONLY EXCEEDANCES OF THE NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND/OR GUIDANCE VALUES ARE REPORTED.

MW-34	7/17/03
VOCs	1.4

- SAMPLE LOCATION
- SAMPLE DATE
- ANALYTICAL RESULT IN MICROGRAMS PER LITER (ug/L)
- ANALYTICAL PARAMETER

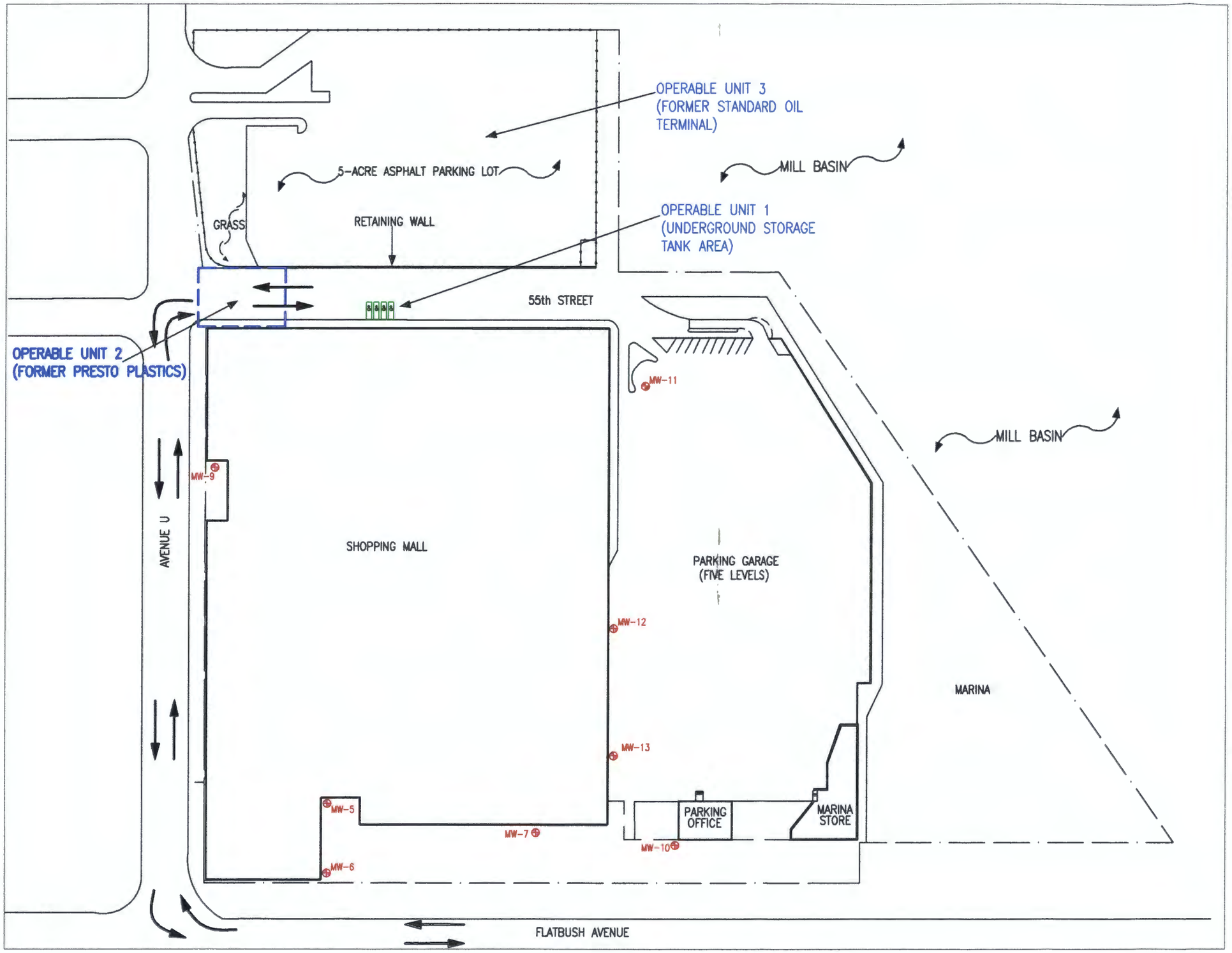
SCALE IN FEET

0 50 100 150

EXCEL Environmental Resources, Inc.

PROJECT:	KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 5 GROUNDWATER ANALYTICAL RESULTS

DRAWN BY:	SCALE:	DATE:
MLE	1" = 50'	11/5/03
CHECKED BY: EM	REVISION:	PROJECT #: 02432



LEGEND:

- PROPERTY BOUNDARY
- MW-12 EXISTING MONITORING WELL
- TWP-1 EXISTING TEMPORARY WELL
- P-1 EXISTING PIEZOMETER
- BOUNDARY OF AREA AT THE END OF 55TH STREET DEFINED AS OPERABLE UNIT 2
- TRUCK ROUTE

0 75 150 300
SCALE IN FEET

EXCEL Environmental Resources, Inc.

PROJECT:	KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 6 TRUCK ROUTES

DRAWN BY: MLE	SCALE: 1" = 150'	DATE: 3/11/08
CHECKED BY: RAH	REVISION: 1.0	PROJECT #: 02432

APPENDIX A

RIRA/RAW REPORT (ELECTRONIC)

APPENDIX B

ENVIRONMENTAL EASEMENT

County: Kings Site No: V00323 Contract/Order No.

ENVIRONMENTAL EASEMENT

THIS INDENTURE made this ____day of _____, 2007, between Alexander's Kings Plaza Center, Inc., residing at c/o Vornado Realty Trust, 210 Route 4 East, Paramus, New Jersey, (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("brownfield sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of environmental easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and of ensuring the potential restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that environmental easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a brownfield site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and;

WHEREAS, Grantor, is the owner of real property located at Kings Plaza Shopping Center of Brooklyn, Kings County, New York known and designated on the tax map of the County of Kings as Section 25, Block 8470, Part of Lot 55, being the same as that property conveyed to Grantor by deed on, and recorded in the Land Division Records of the Office of the New York City Register for the Borough and County of Kings New York on the 18th day of June, 1998 of Deeds, a portion of which, comprised of approximately 0.29 acres of Lot 55 and designated as OU-2, and hereinafter more fully described in the Legal Description Metes and Bounds attached hereto as Schedule A and made a part hereof, is the subject of this Environmental Easement (the "Controlled Property"). A survey of the entire property prepared by Bartlett, Ludlam & Dill Associates, dated June 13, 1998 is attached hereto as Schedule B and a survey map of the Controlled Property, prepared by Albert W. Tay Licensed Land Surveyor, dated April 21, 2008 is attached hereto as Schedule C;

WHEREAS, the Commissioner does hereby acknowledge that the Department accepts this Environmental Easement in order to ensure the protection of human health and the environment and to achieve the requirements for remediation established at this Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the covenants and mutual promises contained herein and the terms and conditions of **Voluntary Cleanup Agreement Number A2-0403-9911**, Grantor grants, conveys and releases to Grantee a permanent Environmental Easement pursuant to Article 71, Title 36 of the ECL in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the potential restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The following controls apply to the use of the Controlled Property, run with the land are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees, and any person using the Controlled Property:

A. Site Management Plan. The Grantor hereby acknowledges receipt of a copy of the NYSDEC-approved Site Management Plan, dated ("SMP"). The SMP, which is incorporated into the terms of this Environmental Easement, describes obligations that Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system on the Controlled Property, and providing certified reports to the NYSDEC, is a fundamental element of the Department's determination that the Controlled Property is and remains safe for a specific use, but not all uses. The Department may approve changes to the SMP for the Controlled Property from time to time on the basis of requests or information submitted by Grantor, and modifications in applicable statutes regulations, guidance or site conditions. The Department reserves a unilateral right to modify the SMP. Upon notice of not less than thirty (30) days the Department in exercise of its discretion and consistent with applicable law may revise the SMP. The notice shall be a final agency determination. The Grantor and all successors and assigns, assume the burden of performing all of the obligations contained in the SMP and obtaining an up-to-date version of the SMP from:

Regional Remediation Engineer:
Region 2
New York State Department of Environmental Conservation
Hunters Point Plaza

47040 21st Street
Long Island City, NY 111-1-5401

Or:

Site Control Section
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway
Albany, New York 12233

B. The following controls apply to the use of the Controlled Property, run with the land, and binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees, and any person using the Controlled Property:

i. The Controlled Property may be used for **Commercial** use as defined in 6 NYCRR 375-1.8(g)(ii), as long as the long-term Institutional and Engineering controls set forth in the SMP dated December 2007 and any subsequent amendments thereto as may be approved by the Department are employed. Such institutional and engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement, and include, but are not limited to the following:

a. an annual inspection of the Controlled Property will be conducted and an annual certification will be submitted to the Department by a New York State Licensed Professional Engineer, stating that long-term institutional and engineering controls have been properly monitored and maintained, in accordance with the SMP (including documentation of any repairs conducted since the prior certification); and

b. the use of the groundwater underlying the Controlled Property for any purpose, including but not limited to, potable, process or irrigation water, is prohibited without the implementation of necessary water quality treatment as determined by the New York State Departments of Health and Environmental Conservation; and

c. any proposed soil excavation or other activities on the property below the composite cover (consisting of asphalt, concrete or a minimum of two (2) feet of clean fill (meeting the Part 375 SCO calculated as the lower of the SCOs for Residential Use and for Protection of Groundwater, or for which specific approval was given by NYSDEC) requires prior notification to NYSDEC, in accordance with the SMP, and the excavated soil and construction waste water must be managed, characterized, and properly disposed of in accordance with the SMP; and

d. single family housing, vegetable gardens, farming, schools and day care facilities are prohibited on the Controlled Property; and

e. all Engineering Controls must be operated and maintained as specified in the SMP; and

f. data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP; and

g. on-Site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP.

Engineering Controls consist of the existing asphalt-paved 55th Street access road and concrete sidewalk to prevent direct contact with the underlying Historic Fill and groundwater that contains residual base neutral organic compounds (BNs) at concentrations above their respective 6 NYCRR Subpart 375-6 Chapter IV of NYSDEC Rules and Regulations and the Groundwater Quality Criteria, respectively in accordance with the NYSDEC-approved Remedial Action Workplan, dated May 2005.

Specific soil and groundwater quality conditions that warrant the establishment of Institutional and Engineering Controls are provided in the May 2005 Remedial Action Workplan. The Institutional and Engineering Controls will be maintained in accordance with the Post-Remediation Management Plan also provided in the May 2005 Remedial Action Workplan to ensure the continued protection of human health and the environment by controlling disturbances, alterations, and/or modifications thereby limiting human exposure to BN concentrations that remain in soil and groundwater.

Contaminants of concern that remain in soil at concentrations above the Subchapter B, Subpart 375-6 Remedial Program Soil Cleanup Objectives include the following:

BNs: Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene

Contaminants of concern that remain in groundwater at concentrations above the NYSDEC Groundwater Quality Standards include the following:

BNs: Naphthalene, Acenaphthene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene

C. The Controlled Property may not be used for a less restricted level of use such as **unrestricted or restricted residential** use and the above-stated engineering

controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

D. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant of Title 36 to Article 71 of the Environmental Conservation Law.

E. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

F. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury that the controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls employed at the Controlled Property were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such control to protect the public health and environment or constitute a violation or failure to comply with any Site Management Plan for such controls and giving access to such Controlled Property to evaluate continued maintenance of such controls.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Controlled Property, including:

1. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

2. The right to give, sell, assign, or otherwise transfer the underlying fee interest to the Controlled Property by operation of law, by deed, or by indenture, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This environmental easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this environmental easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person intentionally violates this environmental easement, the Grantee may revoke the Certificate of Completion provided under ECL Article 27, Title 14, or Article 56, Title 5 with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach. Grantor shall then have a reasonable amount of time from receipt of such notice to cure. At the expiration of said second period, Grantee may commence any proceedings and take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement in accordance with applicable law to require compliance with the terms of this Environmental Easement.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar its enforcement rights in the event of a subsequent breach of or noncompliance with any of the terms of this Environmental Easement.

6. Notice. Whenever notice to the State (other than the annual certification) or approval from the State is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information: County, NYSDEC Site Number, NYSDEC Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Environmental Easement Attorney
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

Such correspondence shall be delivered by hand, or by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. This environmental easement may be amended only by an amendment executed by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This environmental easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Grantor's Name
By:_____
Title:_____
Date:_____

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss: Environmental Easement/March 2005
COUNTY OF)

On the _____ day of _____, in the year 200_, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation

By:
_____
Alexander B. Grannis, Commissioner

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the _____ day of _____, in the year 200_, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

SCHEDULE A

ALBERT W. TAY

Professional Land Surveyor
60 Lincoln Rd. W.•P.O. Box 312 • Plainview, NY 11803-0312

Tel: (516) 433-3725
Fax: (516) 433-0409
E-Mail: AWTay@MSN.com

April 25, 2008

RE: Kings Plaza Shopping Center
Brooklyn, NY

LEGAL DESCRIPTION

ALL that certain plot, piece or parcel of land situate, lying and being in the Borough of Brooklyn, County of Kings, State of New York, being more particularly bounded and described as follows:

BEGINNING at a point distant the following two (2) courses:

1. RUNNING southerly along the prolongation of the easterly side of East 55th Street a distance of 94.75 feet from the intersection of the easterly side of East 55th Street and the northerly side of Avenue U;

2. THENCE westerly at right angles a distance of 12.08 feet to the true point or place of BEGINNING.

RUNNING THENCE southerly parallel with the easterly side of East 55th Street 140.00 feet;

THENCE westerly at right angles 82.30 feet;

THENCE northerly at right angles 140.00 feet;

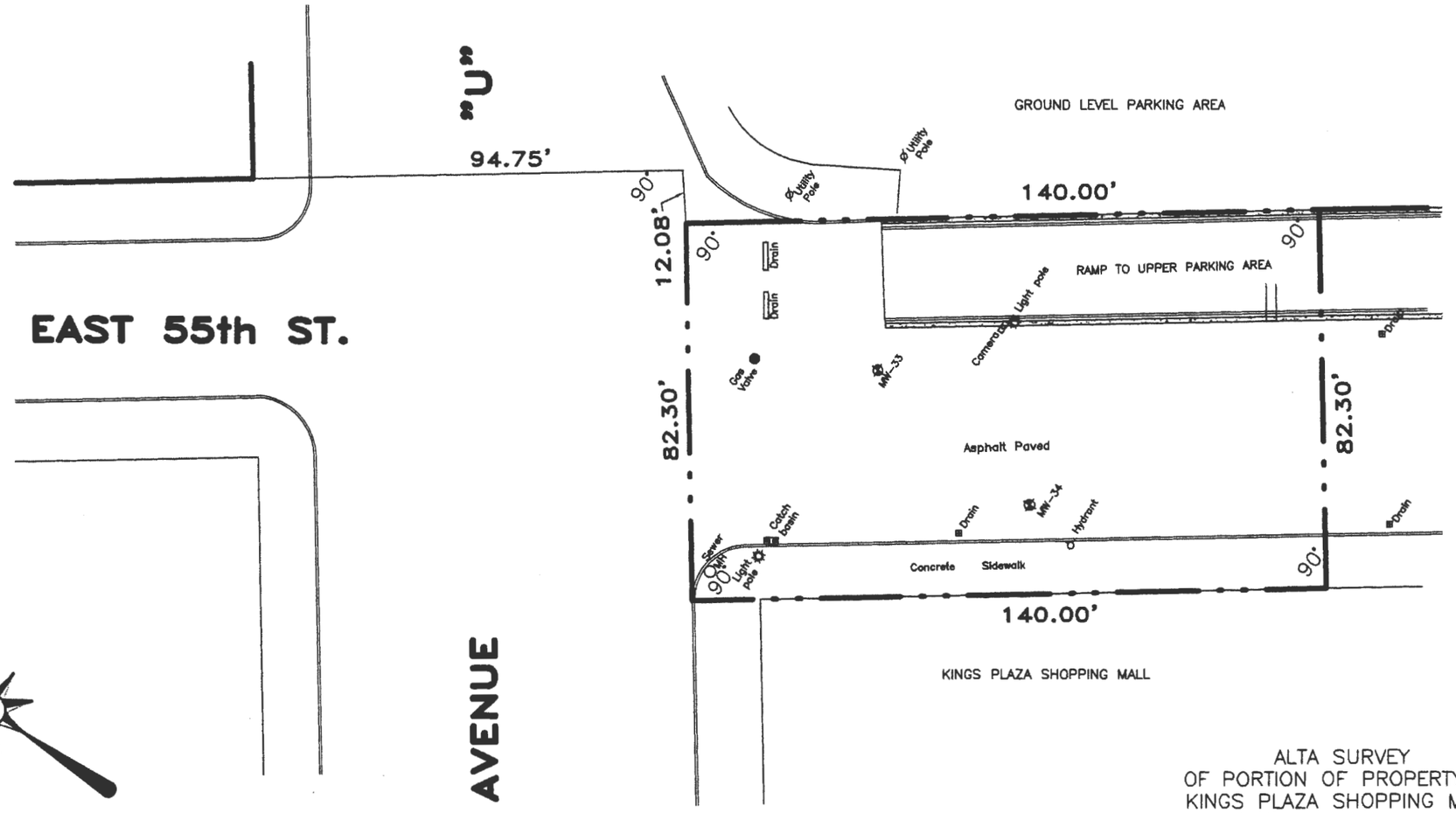
THENCE easterly at right angles 82.30 feet to the point or place of BEGINNING.

Containing within said bounds 11,522 ± square feet.

AWT, L.S. Reference No. 08058

SCHEDULE B

SCHEDULE C



ALTA SURVEY
OF PORTION OF PROPERTY AT
KINGS PLAZA SHOPPING MALL
AVENUE "U" AND EAST 55TH STREET
BROOKLYN, NEW YORK

SURVEYED APRIL 21, 2008

LEGAL DESCRIPTION

ALL that certain plot, piece or parcel of land situate, lying and being in the Borough of Brooklyn, County of Kings, State of New York, being more particularly bounded and described as follows:

BEGINNING at a point distant the following two (2) courses:

1. RUNNING southerly along the prolongation of the easterly side of East 55th Street a distance of 94.75 feet from the intersection of the easterly side of East 55th Street and the northerly side of Avenue U;
2. THENCE westerly at right angles a distance of 12.08 feet to the true point or place of BEGINNING.

RUNNING THENCE southerly parallel with the easterly side of East 55th Street 140.00 feet;
THENCE westerly at right angles 82.30 feet;
THENCE northerly at right angles 140.00 feet;
THENCE easterly at right angles 82.30 feet to the point or place of BEGINNING.
Containing within said bounds 11,522 ± square feet.

ALBERT W. TAY
LICENSED LAND SURVEYOR
P.O. BOX 312, PLAINVIEW, NY 11803
TEL (516) 433-3725 FAX (516) 433-0409
Records of
BERTRAM F. ALLEN CE
BERTRAM F. ALLEN Jr
Port Washington, New York

SCALE 1"= 30'

No. 08058

EMBOSSED SEAL AND SIGNATURE

ALBERT W. TAY
LICENSE NO. 35618

APPENDIX C

HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN
OPERABLE UNIT - 2
5100 KINGS PLAZA
BROOKLYN, NEW YORK
NYSDEC SPILL NO. 98-15285

TECHNICAL REPORT AND APPENDICES A THROUGH B

PREPARED FOR:

VORNADO REALTY TRUST
888 7th AVENUE
NEW YORK, NEW YORK

PREPARED BY:

EXCEL ENVIRONMENTAL RESOURCES, INC.
825 GEORGES ROAD
SECOND FLOOR
NORTH BRUNSWICK, NEW JERSEY 08902
(732) 545-9525

APRIL 2008

HEALTH AND SAFETY PLAN
Operable Unit - 2
Kings Plaza Shopping Center
Brooklyn, New York
NYSDEC VCA No. A2-0403-9911

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HEALTH AND SAFETY PLAN
Operable Unit - 2
Kings Plaza Shopping Center
Brooklyn, New York
NYSDEC VCA No. A2-0403-9911

1.0 INTRODUCTION

This Health and Safety Plan (HASP) has been prepared by Excel Environmental Resources, Inc. (Excel) on behalf of Alexander's King Plaza Centers, Inc. and Vornado Realty Trust (herein referred to as the Owner) for construction activities to be conducted within the area defined as Operable Unit (OU)-3 located at 5100 Kings Plaza, Brooklyn, Kings County, New York (hereafter referred to as the Site). This HASP is required during any construction activities within the Engineering Controls and Deed Restriction boundaries that compromise the integrity of the Engineering Controls to ensure that exposure to contamination in excess of the applicable remediation standards does not occur.

The Kings Plaza Shopping Center is an approximately 31-acre parcel identified on local tax maps as Section 1, Block 847, Lots 50 and 55. Figure 1 shows the location of the Site on the Coney Island, N.Y. United States Geological Survey (USGS) 7.5 Minute Series topographic map. The portion of the Site that is identified as OU-2 is located at the northern end of the 55th Street access road to the Kings Plaza Shopping Center as shown on Figure 2.

This HASP includes provisions to ensure the safe performance of construction activities that compromise the integrity of the existing asphalt pavement and concrete Engineering Controls and includes guidelines for air quality monitoring, safe work practices, equipment safety, and an outline of the requirements for health and safety training and medical surveillance required for project personnel, including subcontractors, involved in subsurface activities, specifically soil excavation, utility maintenance, groundwater recovery, and maintenance of the Engineering Controls.

The HASP also includes a site-specific emergency and/or contingency response plan to be implemented in the event of an emergency and which is an integral part of the safety program. This HASP was prepared in accordance with the applicable requirements of the Occupational Safety and Health Administration (OSHA), the U. S. Environmental Protection Agency (USEPA), and the New York State Department of Environmental Conservation (NYSDEC).

2.0 SITE CHARACTERIZATION AND HAZARD ASSESSMENT

The Site is bounded by Avenue U to the north, the Kings Plaza Shopping Center to the west, a paved parking area that is part of the Kings Plaza property (OU-3) to the east, and the 55th Street access road and OU-1 to the south. As shown on Figure 2, the closest surface water body is the Mill Basin located immediately adjacent to the southern side of the Kings Plaza Shopping Center. Known existing utilities at the Subject Property include sub-grade electric lines, gas lines, water lines, and storm sewer lines that service the shopping mall.

Previous environmental site assessments and investigations conducted in OU-2 have documented subsurface soil and groundwater contamination including volatile organic compounds and base neutral organic compounds. Specific contaminants of concern and the range of concentrations detected are summarized in Table 1.

This chapter summarizes the results of previous soil and groundwater quality investigations conducted at OU-2 as they relate to the health and safety requirements for future construction activities. A more detailed summary of the soil and groundwater quality conditions at the site is provided in several historic reports, including Chapter 2.0 of the RIR/RAW for the Former Presto Plastics Facility, dated August 15, 2001, prepared by IVI on behalf of Vornado for submission to the NYSDEC and in the November 2003 RIRA prepared by Excel.

2.1 Operational History

The area identified as OU-2 is currently owned by Kings Plaza Alexanders, Inc. (Alexanders), a majority-owned subsidiary to Vornado Realty Trust (Vornado). This area is currently identified as the northern end of the 55th Street access road to the Kings Plaza Shopping Center which has only been used as an access road since Alexanders' acquisition and development of the property in the early 1970s. Review of existing environmental reports indicates that Presto Plastic Products Company, Inc. and its successors operated at the Site from the early 1940s to the mid-1960s.

According to a Phase I Environmental Site Assessment (ESA) prepared by Certified Engineering and Testing Company, Inc., approximately 20 railroad tankers were uncovered and removed from the Kings Plaza property in 1969. These tankers were reportedly used as petroleum and/or chemical storage tanks by the Presto Plastic Products Company, Inc. and were in approximately the same location as the Macy's building located to the west of the 55th Street access road. Review of Sanborn™ Fire Insurance Maps of the Site and a 1951 aerial photograph of the Site does not indicate that any operations were specifically located at the northern end of 55th Street in the immediate vicinity of the area defined as OU-2 during the time period shown on the maps and the aerial photographs reviewed.

2.2 Summary of Previous Site Investigations

The following reports document the findings of several environmental site assessments and investigations conducted by others at the subject property, inclusive of OU-2:

- Phase I ESA of Kings Plaza Shopping Mall, Flatbush Avenue and Avenue U, Brooklyn, New York, prepared by Certified Engineering and Testing Company, Inc. on behalf of Alexander's, dated October 4, 1993;
- Contaminant Assessment (CA)/Site Investigation (SI), prepared by IVI on behalf of Rosenman & Colin, LLP, dated July 1997;
- Groundwater Monitoring Report Nos. 1 through 17, prepared by IVI on behalf of Vornado;
- Remedial Investigation Report (RIR)/Remedial Action Workplan (RAW) for the Former Presto Plastics Facility, Operable Unit No. 2, prepared by IVI, dated April 19, 2000;
- Remedial Investigation Report/Remedial Action Workplan (RI/RAW) for the Former Presto Plastics Facility, Operable Unit No. 2, prepared by IVI, dated August 15, 2001; and
- Progress Report Nos. 18 through 25, prepared by Excel on behalf of Vornado.
- Remedial Investigation Report Addendum, prepared by Excel on behalf of Vornado, dated November 2003.

The July 1997 CA/SI Report, prepared by IVI, summarizes the results of an initial investigation of areas within the 55th Street access road, the areas surrounding the Shopping Mall, and the adjacent paved parking lot (OU-3). As outlined in the July 1997 CA/SI Report, the investigation conducted by IVI included the evaluation of groundwater quality through the installation of 13 monitoring wells (designated as MW-1 through MW-13) in the 55th Street access road and around the perimeter of the Shopping Mall.

The August 2001 RIR/RAW summarizes the results of an additional investigation of OU-2 soil and groundwater quality conducted by IVI from June 1999 through September 1999. Review of the August 2001 RIR/RAW indicates that five soil borings (designated B-1 through B-3, B-12, and B-19) were advanced in the immediate vicinity of OU-2. Analytical results of soil samples collected at depths between six to eight feet below ground surface (bgs) indicate that there were no Volatile Organic Compounds (VOCs) detected at concentrations above the NYSDEC soil cleanup criteria in any of these five soil borings. The Semi-Volatile Organic Compound (SVOC) results indicated that several BN compounds were reported in soil boring B-19 at concentrations above the NYSDEC soil cleanup criteria. There were no elevated BN concentrations reported in samples collected from the other four soil borings.

As outlined in the November 2003 RIRA, review of the boring logs prepared by IVI for monitoring wells and soil borings advanced in the 55th Street access road during the RI indicate that fill material consisting of brown to gray, medium to coarse sand with wood, bricks, cinders, glass, cobbles, and shells is laterally extensive within 55th Street from the OU-2 Area at the northern end of the street to the south near the Mill Basin.

As part of the RI, IVI also collected groundwater samples from monitoring wells MW-4, MW-33, and MW-34 within the OU-2 Area. Analytical results indicated that Naphthalene and several BN compounds were reported at concentrations above the New York Groundwater Quality Criteria (NYGWQC). As documented in the November 2003 RIRA, the historic groundwater analytical results

for the OU-2 monitoring wells indicate that BNs are predominantly the only parameters historically reported in groundwater at OU-2 wells MW-4 and MW-33.

Based on the elevated BN concentrations in soil and the composition of the fill, the fill meets the NYSDEC definition of contaminated Historic Fill (defined as non-native fill that was contaminated prior to emplacement; usually due to the presence of ash and cinders which can contribute BNs, metals, and other contaminants to the fill). Furthermore, the historic OU-2 groundwater analytical results were likely biased high due to elevated turbidity in the samples and the fact that NYSDEC-recommended low flow sampling techniques were not used.

In order to complete groundwater quality delineation and to confirm the most appropriate remedial action alternative, Excel conducted a focused soil and groundwater RI in OU-2 in late 2002 and 2003 to verify whether elevated BN concentrations historically reported in soil and groundwater in OU-2 are in fact attributed to Historic Fill. As summarized in the November 2003 RIRA, Excel verified the existence of a layer of non-indigenous fill at the soil/water interface in OU-2 that contains concrete, brick, wood, glass, ash, and cinders and that the elevated BN concentrations and the composition of the fill meets the NYSDEC definition of contaminated Historic Fill.

Based on the focused RI findings, the BN concentrations in soil at levels above the NYSDEC soil cleanup criteria are attributable to the Historic Fill and are not reflective of a historic point source discharge from site operations as previously indicated by IVI. As also summarized in the November 2003 RIRA, the groundwater analytical data generated during two rounds of groundwater sampling and analysis using NYSDEC-recommended low flow sampling techniques indicated that only BNs were reported in groundwater at OU-2 at concentrations slightly above the NYGWQC.

2.3 Health Standards

Permissible Exposure Limits (PELs) and Threshold Limit Values (TLVs) refer to the concentration of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects, based on an 8-hour daily/40-hour workweek. The PELs are standards enforced by OSHA and the TLVs are guidelines recommended by the American Conference of Governmental Industrial Hygienists (ACGIH). The National Institute of Occupational Safety and Health (NIOSH) also has guidelines for exposure limits, they are the Immediately Dangerous to Life and Health (IDLH) and Short Term Exposure Limit (STEL). These guidelines are based upon the best available information from industrial experience, experimental human and experimental animal studies, or a combination of the three. The health standard guidelines for the contaminants of concern are included in Table 2.

Because of the wide variation in individual susceptibility, a small percentage of workers may experience discomfort from some substances at concentrations below the recommended IDLHs, STELs, PELs and TLVs. As a best management safety practice, the strictest guidelines will be used for determining worker protection levels during any future ground intrusive activities.

2.4 Physical Controls

The existing soil and groundwater quality data indicate that the key compounds of potential concern in soil and groundwater include base neutral organic compounds. Most of these compounds are readily monitored in the field with real-time instrumentation and visual field observation can also be used to aid in the identification of Historic Fill. Potential exposure to these materials occurs primarily through inhalation, direct contact, skin absorption, ingestion, and inhalation of soil particulates as dust.

The field activities during construction activities may include:

- Excavation of subsurface soil;
- Excavation of subsurface fill and debris;
- Open excavation recovery of groundwater;
- Handling of impacted soil for purposes of transportation and disposal; and
- Repair/Maintenance of the Engineering Controls.

Any aboveground, non-intrusive activities without risk for exposure to contaminants require workers to adhere to general OSHA construction safety regulations. Workers performing aboveground, non-intrusive activities are required to work in the specified minimum level of personnel protection for construction activities which is **Level D**. Level D personnel protection is defined in Section 5.1 of this HASP.

Only authorized individuals will be permitted in the work area during performance of subsurface activities. These authorized individuals must have completed an OSHA training course per the OSHA Hazard Communication Standard 29 CFR 1910.120 and 29 CFR 1926 Subpart "P" and must have completed an eight-hour Refresher within the last year. Workers onsite during subsurface activities must also follow general OSHA construction safety regulations. Based on the existing information regarding site conditions, workers performing subsurface activities are required to work in a higher level of personnel protection which is **Modified Level D.** Modified Level D personnel protection is defined in Section 5.2 of this HASP.

The primary means for controlling exposure to the contaminants of concern identified in soil and/or groundwater during performance of subsurface activities is through air quality monitoring, minimization of skin contact and ingestion, and employing strict adherence to dust control protocol. Physical controls will therefore be established at the subject property during subsurface activities. Physical controls are summarized as follows:

- To minimize the potential for ingestion, good hygiene practices will be discussed and reinforced on a daily basis and materials will be provided in the decontamination and break zones for all personnel to wash hands and faces prior to taking breaks. In addition, eating, drinking, and smoking will be strictly prohibited in any of the work areas.

- To minimize the potential for exposure through inhalation, routine air quality monitoring will be conducted and dust control measures will be utilized during all excavation and other soil handling activities. Where necessary, water misting will be used to control dust generation during subsurface soil excavation as discussed in Section 4.2.

2.5 Air Monitoring

In addition to physical controls, air monitoring will be conducted as an added precaution during all work activities, including soil excavation and soil handling to minimize the potential for exposure through inhalation. During all field activities, air quality monitoring will be conducted for the following parameters using the specified instrumentation:

- A PID (Rae Systems Model MiniRae or equivalent) will be used to monitor ambient air organic vapor levels.

- Where confined space entry is required, a combination Oxygen/Combustible Gas meter (Model Gastech GT 302 or equivalent) will be used to ensure adequate oxygen levels exist, as well as to monitor for hydrogen sulfide, methane, and a potential flammable/combustible atmosphere.

Each field monitoring instrument will be calibrated in the field at the beginning of each day and, as applicable, background readings will be taken upwind of the work area. Air monitoring will be conducted at the beginning of every shift, at every change in work procedure, and periodically during daily field work. If confined space entry is required, combustible gas monitoring will always be the first step in the sequence of monitoring steps.

Action levels based on air monitoring results are as follows:

- Organic Vapors - greater than five parts per million (ppm) of organic vapors maintained for more than one minute in the ambient air (based on instrument calibration with isobutylene) will require discontinuation of activities and re-evaluation of field activities to determine if the level of personnel protection must be upgraded, engineering controls initiated, or activities postponed;

- For confined space work, the oxygen level must be 19.5 percent or higher in order for work to proceed;

- For confined space work, flammable atmospheres registering greater than 10 percent of the lower explosive limit will require discontinuation of activities and re-evaluation to determine if the level of personnel protection must be upgraded, engineering controls initiated, or activities postponed.

If the aforementioned action levels are equaled or exceeded, work will stop immediately and personnel will move upwind of the work area. The area will be allowed to vent for a minimum of five minutes. At the end of the five-minute waiting period, air quality measurements will be recorded again. If the measured concentrations continue to exceed the action levels, the fieldwork may be postponed until the situation has been re-evaluated, the source of the material is determined, and new health and safety guidelines are established.

2.5.1 Community Air Monitoring Program

During any activities that compromise the integrity of the Engineering Controls, a Community Air Monitoring Plan (CAMP) will be implemented to provide for real-time monitoring at the perimeter of the Site. Based on the site-specific contaminants and the scope of the remediation as detailed in this RAW, real-time monitoring will be conducted for organic vapors and particulates (i.e. fugitive dust). Real-time air monitoring for organic vapors and particulates will be conducted at the downwind perimeter of the Site (equivalent to the Exclusion Zone boundaries) during implementation of any construction activities that compromise the integrity of the Engineering Controls.

The objectives of the CAMP are:

- To provide a measure of protection for the downwind community (i.e. potential offsite receptors, including residences and businesses and on-site workers not directly involved with the remediation work activities) from potential airborne contaminant releases as a direct result of maintenance and/or future improvement activities; and
- To confirm that work activities did not spread contamination off-site through the air.

The following subsections outline the proposed scope of the air monitoring for both organic vapors and particulates.

2.5.1.1 Organic Vapors

Organic vapors will be monitored at the downwind perimeter of the Site on a continuous basis during all ground intrusive activities, including soil excavation, utility work, drilling, and backfill placement. Air monitoring will be conducted with a photoionization detector (PID) that will be calibrated daily prior to the start of work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. All air measurements will be recorded on a Community Air Monitoring Log provided in Appendix A.

The following outlines the action level guidelines for the organic vapor air monitoring data:

- In the unlikely event that the 15-minute running average total organic vapor concentration at the downwind perimeter of the Site (equivalent to the Exclusion Zone boundaries), or individual Work Area, exceeds five parts per million (ppm) above ambient background concentrations, work activities will be temporarily halted and air monitoring will continue. If the total VOC level readily decreases (per instantaneous readings) below five ppm over ambient background, work activities will resume with continued monitoring;
- If total organic vapor levels at the downward perimeter of the Site, or individual Work Area, persist at levels above five ppm over ambient background but less than 25 ppm, work activities will be halted, the source of the vapors identified, corrective actions taken to abate the emissions, and monitoring continued;
- Work activities will then resume if the 15-minute running average total organic vapor concentration is below five ppm in comparison to ambient background concentrations 200 feet downwind of the Site or Work Area, or half the distance to the nearest potential receptor or residential/commercial structure (whichever is less, but in no case less than 20 feet); and
- If the 15-minute total organic vapor concentration at the downward perimeter of the Site, or individual Work Area, exceeds 25 ppm, work activities will be discontinued.

As previously stated, all PID measurements will be recorded on the Daily Community Monitoring Plan Logs and will be available for review by NYSDEC or New York State Department of Health (NYSDOH) personnel upon request.

2.5.2 Particulates

Measures to minimize, or suppress, the generation of fugitive dust emissions will be implemented during ground intrusive activities that may generate fugitive dust, including placement of clean backfill. Particulate concentrations will be monitored on a continuous basis at the upwind and downwind perimeters of the Site using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and integrating over a 15-minute period for comparison to the airborne particulate action levels outlined below. In addition, fugitive dust migration will also be visually assessed for the duration of the remediation to aid in preventing the off-site migration of contaminated particulates.

The following outlines the action level guidelines for the particulate monitoring data:

- In the unlikely event that the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than the ambient background, or upwind perimeter levels, for the 15-minute period or if airborne dust is observed leaving the Site, or the Work Area, then additional dust suppression techniques will be utilized;
- Work will continue with the additional dust suppression techniques provided that the downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind levels and there is no visible dust migrating from the Site and/or individual Work Area;

- After implementation of the additional dust suppression techniques, if the downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind perimeter levels, work will be stopped and work activities will be re-evaluated; and
- Work will resume if the additional dust suppression measures effectively reduce the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind perimeter levels and prevent visible dust migration.

As previously stated, all particulate measurements will be recorded on the Daily Community Monitoring Plan Logs and will be available for review by NYSDEC or NYSDOH personnel upon request.

3.0 WORK AREAS

During all subsurface activities (e.g., soil excavation, debris removal, and soil handling) each primary work area will include three zones: the work zone, the decontamination zone, and the support/break zone. Each of these zone designations is further discussed below.

3.1 Work Zone

The work zone includes the immediate area of activity plus a minimum of 10 feet (i.e. during soil excavation the work zone includes a minimum of a 10-foot radius around the heavy equipment and the excavation). All on-site personnel will use the proper personnel protective equipment designated for the specific task while working in any one of the work zones. As specified in Section 2.3, the specified level of personnel protection for the site is **Level D** for abovegrade, non-intrusive work and **Modified Level D** for all subsurface activities.

The limits of each work zone will be clearly marked by hazard tape and/or hazard cones, as appropriate. If feasible to do so, the personnel within the work zone are responsible for restricting access to unauthorized personnel (e.g. client representatives, site visitors, unauthorized contractor or vendor personnel, or pedestrian traffic) during the performance of the work. Field personnel must use judgment to determine if work should be stopped until unauthorized personnel leave the work area.

3.2 Decontamination Zone

The decontamination zone will be located in an upwind area adjacent to the perimeter of the work zone during performance of all subsurface activities. Upon exiting the work zone, all personnel, small hand tools, sampling equipment, and air monitoring instrumentation will be decontaminated in this area prior to entering the support/break zone. Air monitoring, first aid and emergency response equipment, including a fire extinguisher, will be staged in the decontamination zone. **Decontamination procedures will be in accordance with NYSDEC requirements.**

Large tools, equipment and heavy machinery will be decontaminated using a high pressure steam cleaner and tap water, as appropriate. Decontamination will be conducted at a temporary decon location designed to contain the washwaters. The decon location will be designated in the field. The location will vary depending upon the size of the equipment and the location of the field activity.

Since cleaning solvents and surfactants may be used for decontamination of sampling equipment in accordance with NYSDEC requirements, washwaters generated from the decontamination of sampling equipment will be collected in 5-gallon buckets and/or 55-gallon drums, as appropriate, and transferred to the on-site storage area for subsequent sampling prior to determining final disposition options.

3.3 Support/Break Zone

The support/break zone is the area adjacent to the decontamination zone, also located upwind of the work zone for all subsurface activities. This area can be used for personnel who are not directly involved in the field work for purposes of observation and additional technical support or as a sampling equipment preparation area, field support vehicles parking area, etc. Support/break zone personnel are responsible for alerting proper agencies in the event of an emergency. The emergency telephone numbers are summarized in Table 3 and the map showing the evacuation route to the nearest hospital is provided as Figure 3. These documents will be made available in the support/break zone.

4.0 SAFE WORK PRACTICES

4.1 General

- Protective clothing and equipment will be used as needed during the various field activities. The levels of protection are specified depending upon the degree of potential hazard for both abovegrade and subsurface activities as detailed in Section 5.0 of this HASP.

- All information regarding work to be performed, emergency procedures, and health and safety hazards will be reviewed by the Site Manager before the work begins during a daily Tailgate Safety Meeting. The Tailgate Safety Meeting Form provided in Appendix B will be completed by the Site Manager each day. No work will be performed prior to completion of the Tailgate Safety Meeting. The Tailgate Safety Meeting will be used to discuss:

    - The work scheduled for the day,
    - The health and safety considerations for that particular day's activities,
    - The protective equipment and other materials necessary to perform the work,
    - The potential physical and chemical hazards associated with the work, **including heat and cold stress,**
    - The procedures to be used to signal an emergency or an injury, as well as any questions on the work scope and/or safety issues.

- Operators of trucks and heavy equipment used onsite will be properly trained in the inspection and operation of their equipment. The contractor's Site Supervisor will be responsible to check the proficiency of each of their operators.

- One team member will provide guidance to the equipment operator using pre-established hand signals. Audio backup alarms will be utilized on all heavy equipment onsite. Perimeter barricades will be placed around equipment used in a fixed location.

- A fire extinguisher will be kept onsite during all field activities.

- Smoking will not be permitted on the premises except in the support areas or other specified locations. Any employee not willing to comply with this procedure will be dismissed from the project.

- No unapproved electrical equipment for hazardous atmospheres will be permitted in areas where a flammable atmosphere exists. Static ignition sources will be identified and eliminated by the use of bonding and grounding techniques.

- A complete first-aid kit will be readily available onsite. If a serious injury occurs, the local hospital and ambulance will be summoned to evacuate the injured person.

Note that during all subsurface activities, only authorized personnel will be permitted in the work area. These authorized individuals must have successfully completed an OSHA training course per the OSHA Hazard Communication Standard 29 CFR 1910.120 and 29 CFR 1926 Subpart "P" and must have completed an 8-hour OSHA Refresher within the last year.

4.2 Soil Excavation

Soil excavation will be conducted in accordance with the following procedures:

- Before any subsurface excavation, the existence and location of underground piping, electrical equipment and gas lines will be determined. A utility mark-out will be conducted and existing drawings and site plans will be reviewed.

- As specified in Sections 3.1 and 5.2 of this HASP, **Modified Level D protective gear** will be worn for all subsurface activities and sampling activities. Depending upon site conditions, other protective gear determined appropriate for a specific work task or work area will also be worn as directed by the Site Manager.

- A clearly marked work area will be established around excavation areas using hazard cones and/or tape prior to the commencement of subsurface activities. Workers should be aware of vehicular traffic in areas located proximate to roadways or driveways. Workers will wear brightly colored clothing or a traffic vest under such conditions.

- In areas where unknown subsurface materials and/or objects are encountered (specifically during soil excavation activities), the inspecting geologist, engineer, and/or support personnel will stand outside the immediate excavation area in an upwind location and air quality monitoring will be conducted by the Site Manager while the soils are removed. Soil removal will proceed with care and no one will enter the immediate area until the area has been cleared for **Modified Level D** entry by the Site Field Supervisor or her/his designee.

- Field operations will be suspended if the airborne PID concentration exceeds 5 ppm of total organic vapors on the PID in the immediate area (a 1-foot radius) of the point of soil excavation. The Site Field Supervisor will take the necessary actions as outlined in Section 2.4 of this HASP.

- Dust generation will be minimized during all soil excavation or other soil handling activities. Sufficient sources of water will be made available for application of water mist to control dust generation. If soil stockpiling is required, all stockpiled soils will be kept moist to minimize dust. Stockpiles will be covered with plastic sheeting if they remain onsite for more than four hours prior to transport and disposal.

- Any areas where soils are excavated beyond five feet in depth must be either shored or the sidewalls must be sloped or stepped. Refer to Subsection 4.2.1 for excavation safety procedures and see 29 CFR 1926 Subpart "P" for more information.

- No one will enter any excavation area or confined space without first properly monitoring the ambient atmosphere. Air monitoring will include measurement of combustible gas and oxygen. Appropriate safety equipment must also be used, including chest harness and backup support personnel.

4.2.1 Excavation Safety

- Work involving excavation or trenching shall be subject to Federal and New York State requirements.

- Personnel entry into any excavation or trench that is more than five feet deep shall only be permitted if the excavation or trench is properly shored or sloped and is determined to be safe for entry by the Site Field Supervisor.

- Daily inspections of any excavations will be made by the Site Manager. If there is evidence of a possible cave-in or slide, work in the excavation shall cease until the necessary safeguards have been employed.

- Trenches or excavations extending more than four feet deep will have ladders or steps strategically located so as to require no more than 25 feet of lateral travel between a means of egress. Ladders shall be placed at an angle not more than 30 degrees from vertical and secured as necessary. Ladder side rails shall extend at least three feet above the original ground surface.

- All excavated soils shall be located at least two feet from the edge of the excavation to prevent backfall into the excavation. No method that disturbs the in-situ soil (such as driving stakes) shall be used to contain excavated materials.

- A safety fence or other barricade, and appropriate warning signs will be used to isolate the excavation area.

For excavation of soil to depths greater than five feet, additional safety precautions must be adhered to as specified in the OSHA regulations 29 CFR 1926.

4.3 Open Excavation Groundwater Recovery

Open excavation groundwater recovery will be conducted in accordance with the following procedures:

- Before any subsurface excavation, the existence and location of underground piping, electrical equipment and gas lines will be determined. A utility mark-out will be conducted and existing drawings and site plans will be reviewed.

- As specified in Sections 3.1 and 5.2 of this HASP, Modified Level D protective gear will be worn for all subsurface activities, manual free-phase product recovery, and sampling activities. Depending upon site conditions, other protective gear determined appropriate for a specific work task or work area will also be worn as directed by the Site Field Supervisor.

- A clearly marked work area will be established around excavation areas using hazard cones and/or tape prior to the commencement of subsurface activities. Workers should be aware of vehicular traffic in areas located proximate to roadways or driveways. Workers will wear brightly colored clothing or a traffic vest under such conditions.

- In areas where an unknown subsurface materials and/or objects are encountered (specifically during soil excavation activities), the inspecting geologist, engineer, and/or support personnel will stand outside the immediate excavation area in an upwind location and air quality monitoring will be conducted by the Site Field Supervisor while the soils are removed. Soil removal will proceed with care and no one will enter the immediate area until the area has been cleared for Modified Level D entry by the Site Field Supervisor or her/his designee.

- Field operations will be suspended if the airborne PID concentration exceeds 5 ppm of total VOCs on the PID in the immediate area (a one-foot radius) of the point of soil excavation. The Site Field Supervisor will take the necessary actions as outlined in Section 2.4 of this HASP.

- No one will enter any excavation area or confined space without first properly monitoring the ambient atmosphere. Air monitoring will include measurement of combustible gas and oxygen. Appropriate safety equipment must also be used, including chest harness and backup support personnel.

4.4 Soil and Debris Handling

Stockpiled soil and waste debris handling will be conducted in accordance with the following procedures:

- As specified in Sections 3.1 and 5.2 of this HASP, **Modified Level D protective gear** will be worn for all activities with potential for contact with contaminants. Depending upon site conditions, other protective gear determined appropriate for a specific work task or work area will also be worn as directed by the Site Field Supervisor.

- A clearly marked work area will be established around the work area using hazard cones

and/or tape prior to the commencement of subsurface activities. Workers should be aware of vehicular traffic in areas located proximate to roadways or driveways. Workers will wear brightly colored clothing or a traffic vest under such conditions.

- All heavy equipment must have backup audio alarms.
- Only qualified individuals are to operate heavy equipment.
- To safely aid in moving heavy materials, alloy steel chain, wire rope, or synthetic web slings manufactured with a durable tag attached that indicates the working load limit of the sling shall be used. Slings that are damaged, defective, shortened, kinked, or under-rated for the load shall not be used.
- Get help whenever you are in doubt about a material's weight and always use the buddy system.
- Never walk directly in back of or to the side of heavy equipment without the operator's knowledge.
- Continuous air monitoring will be conducted during soil handling activities. Field operations will be suspended if the airborne PID concentration exceeds five ppm of total VOCs on the PID in the immediate area (a one-foot radius) of the point of soil sampling. The Site Manager will take the necessary actions as outlined in Section 2.4 of this HASP.
- All stockpiled soils will be kept moist to minimize dust. Stockpiles will be covered with plastic sheeting if they remain onsite for more than four hours prior to transport and disposal.

4.5 Confined Space Entry

If necessary during performance of site field work, entry into a confined space shall be subject to all applicable Federal and New York State regulations. The required procedures that will be followed prior to employee entry in a confined space include:

- Initial hazard assessment including atmospheric testing of the confined space for, at a minimum, oxygen content, flammability and toxic contaminants.
- Mechanical ventilation of the confined space, if needed.
- Employee training and indoctrination of confined space entry per 29 CFR 1910.146.
- Entrant shall wear an Oxygen monitoring device.
- Personnel protective equipment to be used will be a minimum of Level C protection.

- Level B personnel protection, including a self-contained breathing apparatus (SCBA), will be required for confined space entry if pre-entry atmospheric testing indicates contaminant concentrations greater than two times the TLV or the oxygen content is not between 19.5 percent and 23.5 percent.

- Air monitoring test results shall be recorded by the Site Manger and/or his/her designee.

4.6 Heat Stress

For each day of work, one or more of the following measures will be used to help control heat stress as needed:

- An adequate on-site supply of liquids will be provided to replace lost body fluids. Replacement fluids can be a 0.1 percent salt-water solution, commercial mixes such as Gatorade or Quick Kick, or a combination of these with fresh water.

- Establishment of a work regimen that will provide adequate rest periods for cooling down.

- Provide cooling devices such as vortex tubes or cooling vests which be worn beneath protective garments, as appropriate.

- Take breaks in a cool area.

- Inform employees of the importance of adequate rest, acclimation and proper diet in the prevention of heat stress.

Since the field work will be conducted during the summer and fall months, the Site Field Supervisor will monitor the workers for symptoms of heat stress, especially in areas where protective clothing is being worn. Symptoms may include **fatigue; irritability; headache; faintness; weak, rapid pulse; shallow breathing; cold, clammy skin; profuse perspiration.** Heat related problems are further discussed below:

- **Heat Rash** - caused by continual exposure to heat and humid air, and aggravated by chaffing clothes. Heat rash decreases a person's ability to tolerate heat as well as becoming a nuisance.

- **Heat Cramps** - caused by profuse perspiration with inadequate water intake and chemical electrolyte imbalance. This results in muscle spasms and pain in the extremities and abdomen.

- **Heat Exhaustion** - increased stress on various organs to meet increasing demands to cool the body which will result in the following signs and symptoms: shallow breathing; pale, cool, moist skin; profuse sweating; dizziness; and lassitude.

- **Heat Stroke** - the most severe form of heat stress which requires immediate treatment by cooling the body or death may result. Signs and symptoms include red, hot, dry skin; no perspiration; nausea, dizziness and confusion; strong, rapid pulse; and coma.

If symptoms of heat stress are observed, the following procedures will be implemented:

- Instruct victim to lie down in a cool, shaded area, or air-conditioned room and elevate feet.

- Massage legs toward heart.

- Give cold salt water (1/2 teaspoon salt to 1/2 glass of water) or cool, sweetened drink, especially not iced tea or coffee, every 15 minutes until victim recovers.

- **DO NOT** let victim sit up, even after feeling recovered. Victim should rest for a while longer.

4.7 Cold Stress

This section applies to work which may be conducted for this project in the late fall and/or winter months. Workers should be protected from exposure to extreme cold temperatures so that the body temperature does not fall below 36 degrees Celsius (98.6 degrees Fahrenheit). Lower body temperature may result in reduced mental alertness, irrational decision making or loss of consciousness.

When the ambient air temperature is below 40 to 45 degrees Fahrenheit, workers must wear warm clothing, such as whole-body thermal underwear, wool socks, insulated gloves and knit caps. If the clothing of the worker may become wet on the job site, an outer impermeable layer should be worn. When the worker's underclothing becomes wet, the worker will change into dry clothing.

If symptoms of cold stress are observed, the following procedures will be implemented:

- Victim will be moved into a warm room as soon as possible.

- Be alert for breathing difficulties; start rescue breathing techniques, if necessary.

- Wet or frozen clothing will be removed; immediately rewarm victim by wrapping in blankets.

- If conscious, give victim warm liquids to drink.
- Treat for frostbite, if necessary.
- Consult professional medical help, if required.

5.0 PERSONNEL PROTECTION PROGRAM

Equipment for personnel protection will be selected based on the known and potential site-specific contaminants of concern and the ambient air quality conditions, as determined through air monitoring by the Site Manger. It is the responsibility of the Site Manager to specify the appropriate level of protection required for all site work.

The levels of protection which may be required for this project include, in decreasing order of likelihood, **Level D,** and **Modified Level D**. If determined necessary by the Site Health and Safety Officer, **Level C** protection may be required for specific tasks. If conditions exist which would require upgrading to **Level B,** which necessitates the use of a self-contained breathing apparatus (SCBA) in addition to the Level C protective clothing, then the work will be discontinued and the situation will be further evaluated.

It is anticipated that abovegrade, non-intrusive work will be conducted primarily in **Level D,** and that all activities which involve subsurface excavation or the potential for contact with contaminants will be conducted primarily in **Modified Level D,** however, certain tasks may require an upgrade in the level of worker protection may be encountered during soil excavation activities. Therefore, provisions will be made to have the necessary equipment at the site during subsurface activities to upgrade from Modified Level D to Level C, which includes respiratory protection. Provisions can also be made for emergency upgrade to Level B, including an onsite SCBA, if conditions warrant (e.g., to assist in an emergency or to further assess a situation). This action will require temporary postponement of field activities.

The final determination regarding the appropriate level of protection for each work area will be made by the Site Manager based upon the known or suspected hazards and conditions of each work area. The required elements of Modified Level D and Level C personnel protection are described below.

5.1 Level D Protection

The minimum level of personnel protection which will be required for abovegrade, non-intrusive work activities is **Level D**. This level of protection shall be used for abovegrade, non-intrusive work only and shall not be permitted for any other work tasks conducted onsite. The following personnel protection equipment is required for Level D protection:

- Protective work coveralls;
- Steel-toed boots;
- Safety glasses;
- Hard hat; and
- Hearing protection, as necessary.

5.2 Modified Level D Protection

The minimum level of protection which will be required for all on-site personnel during all subsurface activities is **Modified Level D**. This level of protection shall be used for soil excavation, groundwater recovery and sampling, and any other waste handling activities. The following equipment will comprise the required **Modified Level D** personnel protection:

- Tyveks will be used during soil excavation, drilling activities, soil and groundwater sampling, and other soil handling activities due to the increased potential for skin contact with soils and groundwater;
- Steel-toed boots with chemical protection (latex boot protectors) are required for all on-site activities;
- Safety glasses during all on-site activities;
- Hard hat during all excavation and drilling activities;
- Outer chemical-resistant Nitrile or Poly Vinyl Chloride (PVC) gloves with inner latex or vinyl gloves during all on-site activities; and
- Hearing protection, as necessary.

5.3 Level C Protection

Level C personnel protection will be required when the nature of the material and airborne concentration of known or suspected contaminants are at or above the OSHA PEL or ACGIH TLV, or when the PID readings are greater than five ppm in the ambient air within the breathing zone. The following equipment will be used for Level C personnel protection:

- Full-face, air purifying respirators with NIOSH/Mine Safety Association approved organic vapor and acid gas cartridge (GMC) in combination with high efficiency particulate filter (HEPA); if specified by the Site Manager, half-face respirators may be utilized if accompanied by chemical splash goggles;
- Hooded, chemical-resistant Saranex-coated Tyvek (outer);
- Gloves (inner) - latex or vinyl;
- Gloves (outer) - chemical-resistant Nitrile or PVC;
- Boots (outer) - chemical-resistant Neoprene boots with steel toes;
- Hard hat;

- Emergency egress respirator protection; and
- Hearing protection, as necessary.

6.0 WORKER TRAINING

The following health and safety training programs are required for on-site personnel involved in subsurface activities at the site, specifically soil excavation, sampling, groundwater recovery, and any other soil or waste handling activities:

- **Health and Safety Training** - Satisfactory completion of a 40-hour course that covers all topics required in accordance with OSHA standard 1910.120, as well as satisfactory completion of the required 8-hour annual refresher training course.

- **First Aid and CPR** - At least one on-site project team member will have completed both the first aid and the cardiopulmonary resuscitation (CPR) training. For the subject property, the Site Manager shall be trained in First Aid and CPR.

- **Site-Specific Safety Training** - Instructions will be given during a Tailgate Safety Meeting at the beginning of the project to acquaint field personnel with project-specific health and safety requirements. This meeting will address the key aspects of this HASP.

Workers involved in subsurface activities must complete all of the training described above, with the exception of the site-specific training, prior to entering the site. Visitors and/or client representatives who do not have the appropriate training must remain outside the Work Zone during site visits while subsurface activities are in progress. In addition, a Tailgate Safety Meeting will be conducted at the beginning of each day, or whenever new site field workers arrive at the job site. A copy of the Tailgate Meeting Form is provided as Appendix B.

7.0 MEDICAL SURVEILLANCE PROGRAM

In accordance with OSHA Standard 1910.120 and 1910.134, all on-site field personnel involved in subsurface activities, specifically soil excavation and sampling, groundwater recovery and sampling, and any other soil or waste handling activities, must complete a baseline physical examination prior to start of work in the Work Zone. Tests that are performed for field worker employment physicals should include the following:

- Medical and occupational history and past gastrointestinal, hematologic, renal cardiovascular, reproductive, immunological and neurological problems, along with a history of respiratory disease and personal smoking habits;
- A medical evaluation to determine if the employee is qualified to use a respirator;
- Blood pressure measurements;
- Complete blood count and differential to include hemoglobin and hematocrit determinations, red cell indices and smear of peripheral morphology;
- Blood urea nitrogen and serum creatinine;
- Blood Polychlorinated Biphenyls testing (Gas Chromatography);
- Urinalysis (dipstick and microscopic examination);
- Urine testing for heavy metals including arsenic, lead, mercury, chromium, and cadmium (Atomic Adsorption Spectrophotometry);
- Audiometric examination;
- Pulmonary function test (FEV1.0 and FVC);
- SMA-25 or equivalent liver function test; and
- EKG for employees over 45 years old or when other complications indicate the necessity.

The medical surveillance provided to employees includes a judgment by the medical examiner of the ability of the employee to use either positive or negative pressure respiratory equipment. Any employee found to have a medical condition which could directly or indirectly be aggravated by exposure to chemical substances or by the use of respiratory equipment will not be employed for the project.

Visitors and/or client representatives who have not had the appropriate medical surveillance must remain outside the Work Zone during site visits while subsurface activities are in progress.

8.0 SITE SECURITY

The following site security procedures will be implemented at the subject property to monitor individuals entering the property:

- Upon arriving at the site, all persons will sign in with the Site Manager on the Tailgate Health and Safety form;
- All persons will be equipped with the appropriate personnel protective equipment as necessary to perform the work task(s) in accordance with the requirements of this HASP;
- All persons entering the regulated area must be familiar with and abide by this HASP;
- All persons involved in intrusive subsurface work must have completed the necessary 40 hours of training for uncontrolled hazardous waste site operations and emergency response per 29 CFR 1910.120; and
- Upon completion of each day of work onsite, all persons will sign out with the Site Manager.
- As the site is located on a public shopping mall with heavy pedestrian traffic, additional measures including but not limited to traffic cones and caution tape may be required to prevent unauthorized personnel from entering the work zone. In the event that unauthorized personnel enter and refuse to leave the work zone, work will be stopped and mall security will be contacted. Contact information is provided in Table 3.

9.0 EMERGENCY RESPONSE PLAN

Emergencies must be dealt with in a manner designed to minimize the health and safety risk to site personnel. Work activities will therefore be conducted in groups of at least two workers (e.g. the "buddy system") to provide continuous monitoring of team members during performance of the work and in the event of an emergency. Emergency hand signals and/or the use of blow horns will be discussed and reviewed daily during the Tailgate Safety Meeting so that all on-site personnel are familiar with the emergency signals applicable to this project.

The Emergency Route to the nearest hospital, specifically Kings Highway Hospital, is provided as Figure 3 and the Tailgate Safety Meeting Form is provided as Appendix B.

9.1 Emergency Chain of Command

In the event of an emergency, the chain of command will be the Site Manager, the contractor's Site Supervisor, and team members. Of those present on-site at the time of an emergency, the person highest in the chain of command shall have the responsibility for directing the response activity in the event of an emergency. The actions to be taken by that individual are described as follows:

- Assess the emergency situation and notify site security personnel, as applicable;
- Determine the required response measures and coordinate with the Site Supervisor(s);
- As necessary, contact the appropriate client and public response agency (See Emergency Notification Information provided as Table 3);
- Notify the on-site personnel of the specific actions that will be taken;
- Coordinate the on-site personnel actions;
- Contact contractor representatives, as necessary and appropriate; and
- Complete the Supervisor Injury Report, as applicable, and list on the OSHA Occupational Injury/Illness Form 200, provided as Appendix C.

9.2 Emergency Notification

Emergency notification information is summarized in Table 3. The Emergency Notification Information summary shall be posted in clear view at the site at all times and a copy of the list will be provided to each member of the on-site project team. The list shall be clearly posted at several locations at the site. Local authorities shall be notified by the Site Manager prior to the start of each of the work tasks.

10.0 ACCIDENT, INJURY AND RECORD KEEPING PROCEDURES

If any person working onsite is physically injured or becomes ill, first-aid will be administered by a qualified individual. Depending upon the severity of the injury or illness, the individual may be given emergency first-aid treatment onsite and/or the local emergency medical facility will be contacted along with an ambulance, as necessary. Directions to the nearest hospital, Kings Highway Hospital, are provided in Figure 3.

The Site Manager will prepare a written report detailing the accident, its causes, and consequences within three days from the time of the accident. If the injury to the worker is of a chemical nature, the following first-aid procedures will be instituted as soon as possible:

- **Eye Exposure** - If contaminated material gets into the eyes, the eyes will be flushed immediately using copious amounts of water while lifting up the lower and upper eyelids.

- **Skin Exposure** - If contaminated material gets on the skin, the affected area will be washed with soap or mild detergent.

- **Inhalation** - If an individual inhales a volume of toxic or corrosive vapors, the employee will be removed to a fresh air breathing space at once. If breathing has stopped, artificial respiration will be performed on the affected individual until medical attention arrives and transports the patient to the nearest medical facility.

- **Ingestion** - In the event a person ingests a toxic liquid or solid material, medical attention shall be obtained at once.

All exposure monitoring conducted during the project will be recorded with a description of the field activities. The recorded results and the methodologies will be kept for a period of least 30 years. All logs and reports required by either local, state, and federal regulations will be kept and submitted accordingly.

TABLES

TABLE 1
SUMMARY OF PEAK CONCENTRATIONS OF KEY COMPOUNDS IN GROUNDWATER AND SOIL

Kings Plaza Shopping Center
Brooklyn, New York

GROUNDWATER RESULTS
(concentrations reported in ug/L)

SEMI VOLATILE ORGANIC COMPOUNDS	
COMPOUND	**RANGE**
Naphthalene	ND - 840
2 - Methylnaphthalene	ND - 87
Acenaphthene	ND - 210
Fluorene	ND - 93
Phenanthrene	ND - 110
Anthracene	ND - 86
Bis(2-ethyl-hexyl)phthalate	ND - 6.9
Dibenzofuran	ND - 87
Carbazole	ND - 45
Acenaphthylene	ND - 12
2,4 Dimethylphenol	ND - 17
Benzo (g,h,I) Pyrene	ND - 3.8
Benzo (a) Anthracene	ND - 4.9
Benzo (b) Fluoranthene	ND - 4.5
Indeno (1,2,3-cd) Pyrene	ND - 3.3
Chrysene	ND - 5.3

VOLATILE ORGANIC COMPOUNDS	
COMPOUND	**RANGE**
Benzene	ND - 17
Toluene	ND - 19
Ethylbenzene	ND - 35
o-Xylenes	ND - 13
m&p-Xylenes	ND - 18
1,3,5-Trimethylbenzene	ND - 3.2
Tert-Butylbenzene	ND - 4.3
1,2,4-Trimetylbenzene	ND - 9.3
Isopropyltoluene	ND - 12
n-Butylbenzene	ND - 50
Naphthalene	ND - 1,300
cis 1,2 Dichloroethene	ND - 9.1

SOIL RESULTS
(concentrations reported in mg/kg)

SEMI VOLATILE ORGANIC COMPOUNDS	
COMPOUND	**RANGE**
Naphthalene	ND - 0.96
Phenanthrene	ND - 52
Pyrene	ND - 81
Fluoranthene	ND - 76
Benzo (a) Anthracene	ND - 33
Chrysene	ND - 34
Benzo (b) Fluoranthene	ND - 26
Benzo (k) Fluoranthene	ND - 29
Benzo (a) Pyrene	ND - 32
Indeno (1,2,3 - cd) pyrene	ND - 21
Dibenz (a,h) anthracene	ND - 6.2

NOTES:
ND - Not detected above the method detection limit.

TABLE 2
SUMMARY OF EXPOSURE LIMITS FOR KEY COMPOUNDS OF CONCERN
Kings Plaza Shopping Center
Brooklyn, New York

CONTAMINANT	PEL	STEL	TLV	IDLH
1,2,4 Trimethylbenzene	25 ppm	---	NA	ND
p/m Xylene	100 ppm	150 ppm	100 ppm	900 ppm
1,3,5 Trimethylbenzene	25 ppm	---	NA	ND
Benzene	0.1 ppm	1 ppm	10 ppm	500 ppm
Toluene	100 ppm	150 ppm	50 ppm	500 ppm
n-Butyl Benzene	NA	NA	NA	NA
Ethylbenzene	100 ppm	125 ppm	NA	800 ppm
tert-Butylbenzene	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	NA	NA
o-Xylenes	100 ppm	150 ppm	100 ppm	900 ppm
Isopropyltoluene	NA	NA	NA	NA
cis 1,2 Dichloroethene	NA	NA	NA	NA
Naphthalene	10 ppm	15 ppm	NA	250 ppm
bis-(2 Ethylhexyl)-phthalate*	5 mg/m^3	10 mg/m^3	NA	5000 mg/m^3
Pyrene*	0.1 mg/m^3	---	NA	80 mg/m^3
Phenanthrene*	0.1 mg/m^3	---	NA	80 mg/m^3
Fluoranthene	NA	NA	NA	NA
2 - Methylnaphthalene	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA
Anthracene*	0.1 mg/m^3	---	NA	80 mg/m^3
Dibenz (a,h) anthracene	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA
2,4 Dimethylphenol	NA	NA	NA	NA
Benzo (g,h,l) Pyrene	NA	NA	NA	NA
Benzo (a) Anthracene	NA	NA	NA	NA
Benzo (b) Fluoranthene	NA	NA	NA	NA
Indeno (1,2,3-cd) Pyrene	NA	NA	NA	NA
Chrysene*	0.1 mg/m^3	---	NA	80 mg/m^3
Benzo (k) Fluoranthene	NA	NA	NA	
Benzo (a) Pyrene*	0.1 mg/m^3	---	NA	80 mg/m^3

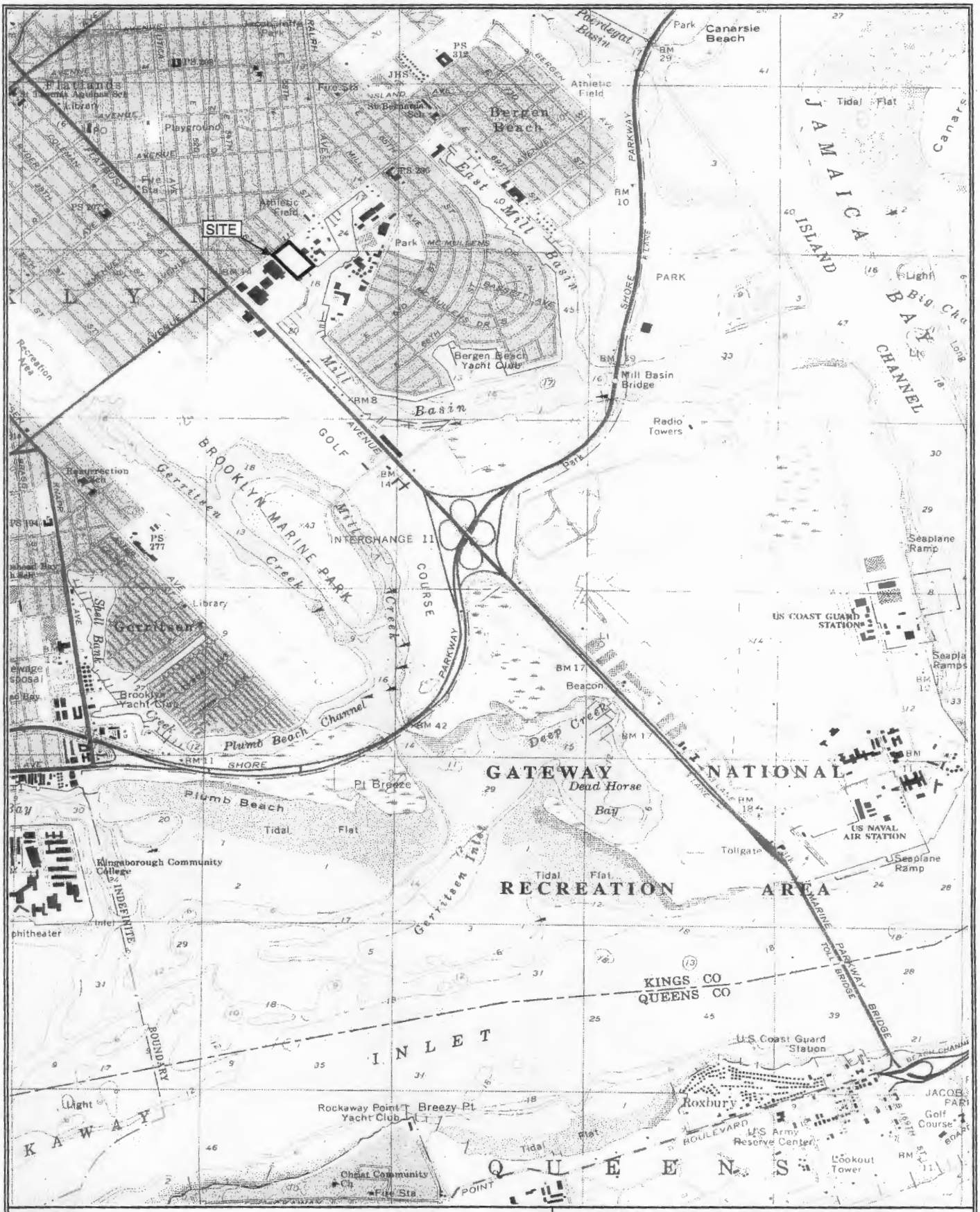
KEY:
PELs - Permissible Exposure Limits
STELs - Short Term Exposure Limits
TLV - Threshold Limit Values
IDLH - Immediately Dangerous to Life and Health
ND - Indicates that an IDLH has not as yet been determined
* - Potential occupational carcinogen
NA - Not available
--- - No criteria listed
ppm - Parts per million
mg/m^3 - Milligrams per cubic meter

NOTES:
TLV values obtained from the American Conference of Governmental Industrial Hygienists. All other values obtained from the National Institue for Occupational Safety and Health Pocket Guide To Chemical Hazards.

TABLE 3
EMERGENCY NOTIFICATION INFORMATION
Kings Plaza Shopping Center
5100 Kings Plaza
Brooklyn, New York

SITE LOCATION:	Kings Plaza Shopping Center 5100 Kings Plaza Brooklyn, New York
CROSS ROAD:	Avenue U and 55th Street
NEW YORK POLICE, FIRE, AMBULANCE:	911
NEAREST HOSPITAL:	Kings Highway Hospital 2310 Kings Highway Brooklyn, New York 11234 (718) 252-3000
NYSDEC HOTLINE:	1-800-457-7362
USEPA EMERGENCY RESPONSE TEAM:	(800) 424-8802
CHEMTREC:	(800) 262-8200
ADDL CONTACTS:	
VORNADO CONTACTS:	Al Zubczak (201) 587-1000 Emma Dawson (718) 253-5246 (On-Site Manager)
NYSDEC CONTACTS:	Ioana Munteanu (718) 482-44065 (Case Manager)

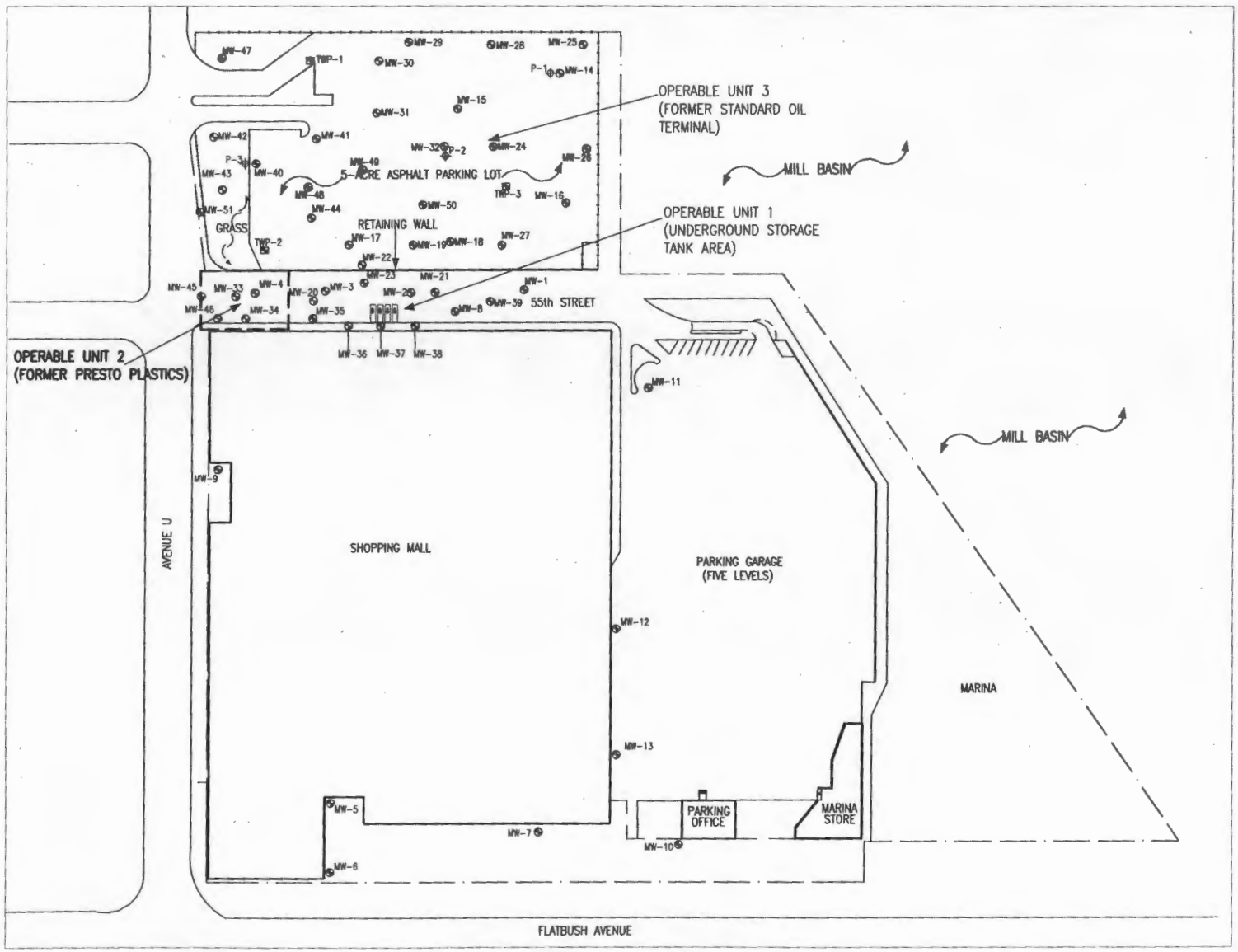
FIGURES



SOURCE:
UNITED STATES GEOLOGICAL SURVEY
7.5 MINUTE SERIES (TOPOGRAPHIC)
CONEY ISLAND, NY QUADRANGLE
1995

EXCEL ENVIRONMENTAL RESOURCES, INC.		
KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK		
FIGURE 1 SITE LOCATION MAP		
DRAWN BY: NA	SCALE: 1:24,000	10/17/2003
CHECKED BY: EM	REVISION: 2.0	PROJECT #: 02432

G:\PROJECTS\02432-OU 2\FIGURES\SITEPLAN-REVISED.DWG

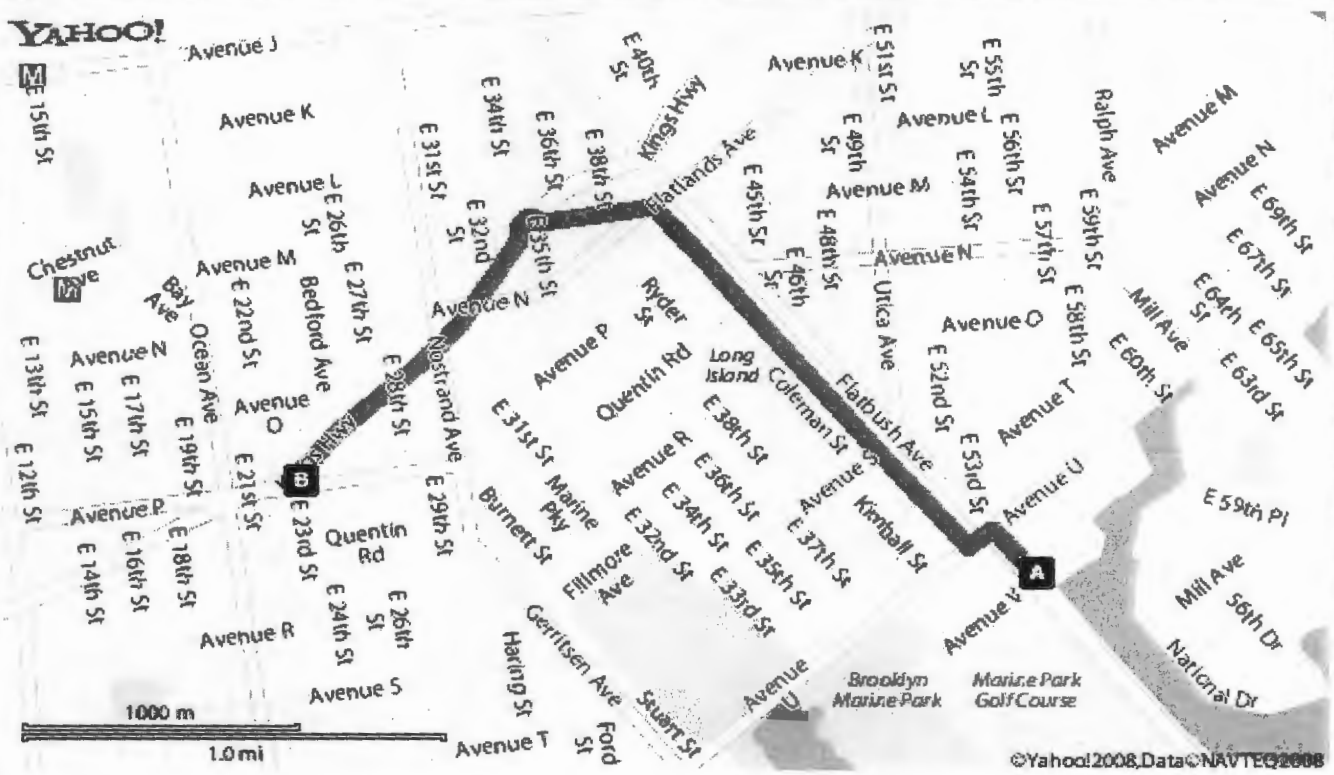


LEGEND:

- PROPERTY BOUNDARY
- MW-12 EXISTING MONITORING WELL
- TWP-1 EXISTING TEMPORARY WELL
- P-1 EXISTING PIEZOMETER
- BOUNDARY OF AREA AT THE END OF 55TH STREET DEFINED AS OPERABLE UNIT 2

EXCEL Environmental Resources, Inc.

PROJECT:	KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK
DESCRIPTION:	FIGURE 2 GENERALIZED SITE PLAN SHOWING LOCATION OF OPERABLE UNIT 2
DRAWN BY: MLE	SCALE: 1" = 150'
CHECKED BY: RAH	REVISION: 1.0
DATE: 12/3/07	PROJECT #: 02432



Start: **Kings Plaza Shopping Center**
5100 Kings Plaza
Brooklyn, New York 11234

End: **Kings Highway Hospital**
2310 Kings Highway (718) 252-3000
Brooklyn, New York 11234

DRIVING DIRECTIONS

Start at 5100 **KINGS PLZ**, BROOKLYN - go **0.1** mi

Turn Left on **AVENUE U** - go **0.1** mi

Turn Right on **HENDRICKSON ST** - go **1.0** mi

Turn Left on **AVENUE M** - go **0.3** mi

At FRASER SQ, take fifth exit onto **KINGS HWY** - go **0.8** mi

Make a Sharp Left Turn on **KINGS HWY**

Arrive at 2310 **KINGS HWY**, BROOKLYN, on the Right

Source:
Yahoomaps.com

EXCEL ENVIRONMENTAL RESOURCES, INC.		
KINGS PLAZA SHOPPING CENTER BROOKLYN NEW YORK		
FIGURE 3 HOSPITAL ROUTE		
DRAWN BY: N/A	SCALE: N/A	4/2/2008
CHECKED BY: RH	REVISION: 0	PROJECT #: 02432

Appendix A

Community Air Monitoring Log

Air Monitoring
Data Sheet
Kings Plaza, Brooklyn, NY

Date:_____

Calibration Reading Time:_____		
Station	**PID (PPM)**	**Data Ram**
A		
B		

Station	**VOCs**		**DataRAM**		
	Background (ppm)	**Stop Work = Background + 5ppm**	**Background (mg/m^3)**	**Add Dust Suppressant = Background + 0.1mg/m^3**	**Stop Work = Background + 0.15mg/m^3**
A					
B					

Time		**7:00**	**7:30**	**8:00**	**8:30**	**9:00**	**9:30**	**10:00**	**10:30**	**11:00**	**11:30**	**Comments**
Station												
A	**PID**											
	DataRAM											
B	**PID**											
	DataRAM											

Time		**12:00**	**12:30**	**13:00**	**13:30**	**14:00**	**14:30**	**15:00**	**15:30**	**16:00**	**16:30**	**Comments**
Station												
A	**PID**											
	DataRAM											
B	**PID**											
	DataRAM											

Appendix B

Tailgate Safety Meeting Form

TAILGATE SAFETY MEETING

DATE: _____ **TIME:** _____ **EXCEL PROJECT NO:** 02432

PROJECT NAME: Kings Plaza Shopping Center
CLIENT: Vornado Realty Trust
LOCATION: Ave U and 55th Street, Brooklyn, New York
TYPE OF WORK:
POTENTIAL HAZARDS: Vehicular traffic, equipment operation, slips, trips, falls, petroleum compounds

SAFETY TOPICS PRESENTED

PROTECTIVE CLOTHING/EQUIPMENT: Modified level D required : hard hats, safety vests, safety glasses steel toe boots, hearing protection, protective coveralls, gloves, etc. Various Safety Equipment as needed.

CHEMICAL HAZARDS: Petroleum compounds in soil and groundwater

PHYSICAL HAZARDS: Vehicular traffic, various equipment, open excavations, debris

EMERGENCY PROCEDURES: Clear the work area, call 911, notify Excel Site Manger, Project Manager, and Client

HOSPITAL/CLINIC: Kings Highway Hospital **PHONE:** (718) 252-3000
HOSPITAL ADDRESS: 2310
DIRECTIONS TO HOSPITAL: Travel west on Avenue U, turn right to travel north on Flatbush Avenue for 1.1 miles, turn left to travel west on Kings Highay for 0.3 miles, turn right to travel west on Avenue M for 0.1 miles, turn left to travel south on 32nd Street for 0.1 miles, arrive at Kings Highway Hospital.

POLICE: NYPD **PHONE:** 911
FIRE: NYFD **PHONE:** 911
SPECIAL EQUIPMENT: PID, 4-Gas meter, Data Ram
OTHER: work safe, watch slips, trips, and falls, be cautious of road traffic and equipment, be cautious of temperature and weather, take breaks as needed

ATTENDEES

NAME PRINTED	SIGNATURE	COMPANY/AFFILIATE

MEETING CONDUCTED BY:

NAME PRINTED **SIGNATURE**

Appendix C

OSHA Occupational Injury/Illness Form 200

U.S. Department of Labor
Occupational Safety and Health Administration

OSHA
Forms for Recording
Work-Related Injuries and Illnesses

Dear Employer:

This booklet includes the forms needed for maintaining occupational injury and illness records for 2004. These new forms have changed in several important ways from the 2003 recordkeeping forms.

In the December 17, 2002 Federal Register (67 FR 77165-77170), OSHA announced its decision to add an occupational hearing loss column to OSHA's Form 300, Log of Work-Related Injuries and Illnesses. This forms package contains modified Forms 300 and 300A which incorporate the additional column M(5) Hearing Loss. Employers required to complete the injury and illness forms must begin to use these forms on January 1, 2004.

In response to public suggestions, OSHA also has made several changes to the forms package to make the recordkeeping materials clearer and easier to use:

- On Form 300, we've switched the positions of the day count columns. The days "away from work" column now comes before the days "on job transfer or restriction."
- We've clarified the formulas for calculating incidence rates.
- We've added new recording criteria for occupational hearing loss to the "Overview" section.
- On Form 300, we've made the column heading "Classify the Case" more prominent to make it clear that employers should mark only one selection among the four columns offered.

The Occupational Safety and Health Administration shares with you the goal of preventing injuries and illnesses in our nation's workplaces. Accurate injury and illness records will help us achieve that goal.

Occupational Safety and Health Administration
U.S. Department of Labor

What's Inside...

In this package, you'll find everything you need to complete OSHA's *Log* and the *Summary of Work-Related Injuries and Illnesses* for the next several years. On the following pages, you'll find:

- ***An Overview: Recording Work-Related Injuries and Illnesses*** — General instructions for filling out the forms in this package and definitions of terms you should use when you classify your cases as injuries or illnesses.
- ***How to Fill Out the Log*** — An example to guide you in filling out the *Log* properly.
- ***Log of Work-Related Injuries and Illnesses*** — Several pages of the *Log* (but you may make as many copies of the *Log* as you need.) Notice that the *Log* is separate from the *Summary*.

- ***Summary of Work-Related Injuries and Illnesses*** — Removable *Summary* pages for easy posting at the end of the year. Note that you post the *Summary* only, not the *Log*.

- ***Worksheet to Help You Fill Out the Summary*** — A worksheet for figuring the average number of employees who worked for your establishment and the total number of hours worked.
- ***OSHA's 301: Injury and Illness Incident Report*** — A copy of the OSHA 301 to provide details about the incident. You may make as many copies as you need or use an equivalent form.

Take a few minutes to review this package. If you have any questions, ***visit us online at www.osha.gov OR call your local OSHA office.*** We'll be happy to help you.

U.S. Department of Labor
Occupational Safety and Health Administration

An Overview:
Recording Work-Related Injuries and Illnesses

The Occupational Safety and Health (OSH) Act of 1970 requires certain employers to prepare and maintain records of work-related injuries and illnesses. Use these definitions when you classify cases on the Log. OSHA's recordkeeping regulation (see 29 CFR Part 1904) provides more information about the definitions below.

The *Log of Work-Related Injuries and Illnesses* (Form 300) is used to classify work-related injuries and illnesses and to note the extent and severity of each case. When an incident occurs, use the *Log* to record specific details about what happened and how it happened. The *Summary* — a separate form (Form 300A) — shows the totals for the year in each category. At the end of the year, post the *Summary* in a visible location so that your employees are aware of the injuries and illnesses occurring in their workplace.

Employers must keep a *Log* for each establishment or site. If you have more than one establishment, you must keep a separate *Log* and *Summary* for each physical location that is expected to be in operation for one year or longer.

Note that your employees have the right to review your injury and illness records. For more information, see 29 Code of Federal Regulations Part 1904.35, *Employee Involvement*.

Cases listed on the *Log of Work-Related Injuries and Illnesses* are not necessarily eligible for workers' compensation or other insurance benefits. Listing a case on the *Log* does not mean that the employer or worker was at fault or that an OSHA standard was violated.

When is an injury or illness considered work-related?

An injury or illness is considered work-related if an event or exposure in the work environment caused or contributed to the condition or significantly aggravated a preexisting condition. Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the workplace, unless an exception specifically applies. See 29 CFR Part 1904.5(b)(2) for the exceptions. The work environment includes the establishment and other locations where one or more employees are working or are present as a condition of their employment. See 29 CFR Part 1904.5(b)(1).

Which work-related injuries and illnesses should you record?

Record those work-related injuries and illnesses that result in:

- death,
- loss of consciousness,
- days away from work,
- restricted work activity or job transfer, or
- medical treatment beyond first aid.

You must also record work-related injuries and illnesses that are significant (as defined below) or meet any of the additional criteria listed below.

You must record any significant work-related injury or illness that is diagnosed by a physician or other licensed health care professional. You must record any work-related case involving cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum. See 29 CFR 1904.7.

What are the additional criteria?

You must record the following conditions when they are work-related:

- any needlestick injury or cut from a sharp object that is contaminated with another person's blood or other potentially infectious material;
- any case requiring an employee to be medically removed under the requirements of an OSHA health standard;
- tuberculosis infection as evidenced by a positive skin test or diagnosis by a physician or other licensed health care professional after exposure to a known case of active tuberculosis.
- an employee's hearing test (audiogram) reveals 1) that the employee has experienced a Standard Threshold Shift (STS) in hearing in one or both ears (averaged at 2000, 3000, and 4000 Hz) and 2) the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (also averaged at 2000, 3000, and 4000 Hz) in the same ear(s) as the STS.

What is medical treatment?

Medical treatment includes managing and caring for a patient for the purpose of combating disease or disorder. The following are not considered medical treatments and are NOT recordable:

- visits to a doctor or health care professional solely for observation or counseling;

What do you need to do?

1. Within 7 calendar days after you receive information about a case, decide if the case is recordable under the OSHA recordkeeping requirements.
2. Determine whether the incident is a new case or a recurrence of an existing one.
3. Establish whether the case was work-related.
4. If the case is recordable, decide which form you will fill out as the injury and illness incident report.

   You may use *OSHA's 301: Injury and Illness Incident Report* or an equivalent form. Some state workers compensation, insurance, or other reports may be acceptable substitutes, as long as they provide the same information as the OSHA 301.

How to work with the Log

1. Identify the employee involved unless it is a privacy concern case as described below.
2. Identify when and where the case occurred.
3. Describe the case, as specifically as you can.
4. Classify the seriousness of the case by recording the most serious outcome associated with the case, with column G (Death) being the most serious and column J (Other recordable cases) being the least serious.
5. Identify whether the case is an injury or illness. If the case is an injury, check the injury category. If the case is an illness, check the appropriate illness category.

- diagnostic procedures, including administering prescription medications that are used solely for diagnostic purposes; and
- any procedure that can be labeled first aid. *(See below for more information about first aid.)*

What is first aid?

If the incident required only the following types of treatment, consider it first aid. Do NOT record the case if it involves only:

- using non-prescription medications at non-prescription strength;
- administering tetanus immunizations;
- cleaning, flushing, or soaking wounds on the skin surface;
- using wound coverings, such as bandages, BandAids™, gauze pads, etc., or using SteriStrips™ or butterfly bandages.
- using hot or cold therapy;
- using any totally non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.;
- using temporary immobilization devices while transporting an accident victim (splints, slings, neck collars, or back boards).
- drilling a fingernail or toenail to relieve pressure, or draining fluids from blisters;
- using eye patches;
- using simple irrigation or a cotton swab to remove foreign bodies not embedded in or adhered to the eye;
- using irrigation, tweezers, cotton swab or other simple means to remove splinters or foreign material from areas other than the eye;
- using finger guards;
- using massages;
- drinking fluids to relieve heat stress

How do you decide if the case involved restricted work?

Restricted work activity occurs when, as the result of a work-related injury or illness, an employer or health care professional keeps, or recommends keeping, an employee from doing the routine functions of his or her job or from working the full workday that the employee would have been scheduled to work before the injury or illness occurred.

How do you count the number of days of restricted work activity or the number of days away from work?

Count the number of calendar days the employee was on restricted work activity or was away from work as a result of the recordable injury or illness. Do not count the day on which the injury or illness occurred in this number. Begin counting days from the day after the incident occurs. If a single injury or illness involved both days away from work and days of restricted work activity, enter the total number of days for each. You may stop counting days of restricted work activity or days away from work once the total of either or the combination of both reaches 180 days.

Under what circumstances should you NOT enter the employee's name on the OSHA Form 300?

You must consider the following types of injuries or illnesses to be privacy concern cases:

- an injury or illness to an intimate body part or to the reproductive system,
- an injury or illness resulting from a sexual assault,
- a mental illness,
- a case of HIV infection, hepatitis, or tuberculosis,
- a needlestick injury or cut from a sharp object that is contaminated with blood or other potentially infectious material (see 29 CFR Part 1904.8 for definition), and
- other illnesses, if the employee independently and voluntarily requests that his or her name not be entered on the log.

You must not enter the employee's name on the OSHA 300 *Log* for these cases. Instead, enter "privacy case" in the space normally used for the employee's name. You must keep a separate, confidential list of the case numbers and employee names for the establishment's privacy concern cases so that you can update the cases and provide information to the government if asked to do so.

If you have a reasonable basis to believe that information describing the privacy concern case may be personally identifiable even though the employee's name has been omitted, you may use discretion in describing the injury or illness on both the OSHA 300 and 301 forms. You must enter enough information to identify the cause of the incident and the general severity of the injury or illness, but you do not need to include details of an intimate or private nature.

What if the outcome changes after you record the case?

If the outcome or extent of an injury or illness changes after you have recorded the case, simply draw a line through the original entry or, if you wish, delete or white-out the original entry. Then write the new entry where it belongs. Remember, you need to record the most serious outcome for each case.

Classifying injuries

An injury is any wound or damage to the body resulting from an event in the work environment.

Examples: Cut, puncture, laceration, abrasion, fracture, bruise, contusion, chipped tooth, amputation, insect bite, electrocution, or a thermal, chemical, electrical, or radiation burn. Sprain and strain injuries to muscles, joints, and connective tissues are classified as injuries when they result from a slip, trip, fall or other similar accidents.

U.S. Department of Labor
Occupational Safety and Health Administration

Classifying illnesses

Skin diseases or disorders

Skin diseases or disorders are illnesses involving the worker's skin that are caused by work exposure to chemicals, plants, or other substances.

Examples: Contact dermatitis, eczema, or rash caused by primary irritants and sensitizers or poisonous plants; oil acne; friction blisters, chrome ulcers; inflammation of the skin.

Respiratory conditions

Respiratory conditions are illnesses associated with breathing hazardous biological agents, chemicals, dust, gases, vapors, or fumes at work.

Examples: Silicosis, asbestosis, pneumonitis, pharyngitis, rhinitis or acute congestion; farmer's lung, beryllium disease, tuberculosis, occupational asthma, reactive airways dysfunction syndrome (RADS), chronic obstructive pulmonary disease (COPD), hypersensitivity pneumonitis, toxic inhalation injury, such as metal fume fever, chronic obstructive bronchitis, and other pneumoconioses.

Poisoning

Poisoning includes disorders evidenced by abnormal concentrations of toxic substances in blood, other tissues, other bodily fluids, or the breath that are caused by the ingestion or absorption of toxic substances into the body.

Examples: Poisoning by lead, mercury, cadmium, arsenic, or other metals; poisoning by carbon monoxide, hydrogen sulfide, or other gases; poisoning by benzene, benzol, carbon tetrachloride, or other organic solvents; poisoning by insecticide sprays, such as parathion or lead arsenate; poisoning by other chemicals, such as formaldehyde.

Hearing Loss

Noise-induced hearing loss is defined for recordkeeping purposes as a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more in either ear at 2000, 3000 and 4000 hertz, and the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (also averaged at 2000, 3000, and 4000 hertz) in the same ear(s).

All other illnesses

All other occupational illnesses.

Examples: Heatstroke, sunstroke, heat exhaustion, heat stress and other effects of environmental heat; freezing, frostbite, and other effects of exposure to low temperatures; decompression sickness; effects of ionizing radiation (isotopes, x-rays, radium); effects of nonionizing radiation (welding flash, ultra-violet rays, lasers); anthrax; bloodborne pathogenic diseases, such as AIDS, HIV, hepatitis B or hepatitis C; brucellosis; malignant or benign tumors; histoplasmosis; coccidioidomycosis.

When must you post the Summary?

You must post the *Summary* only — not the *Log* — by February 1 of the year following the year covered by the form and keep it posted until April 30 of that year.

How long must you keep the Log and Summary on file?

You must keep the *Log* and *Summary* for 5 years following the year to which they pertain.

Do you have to send these forms to OSHA at the end of the year?

No. You do not have to send the completed forms to OSHA unless specifically asked to do so.

How can we help you?

If you have a question about how to fill out the *Log*,

- ❑ ***visit us online at www.osha.gov*** or
- ❑ ***call your local OSHA office.***

U.S. Department of Labor
Occupational Safety and Health Administration

Optional

Calculating Injury and Illness Incidence Rates

What is an incidence rate?

An incidence rate is the number of recordable injuries and illnesses occurring among a given number of full-time workers (usually 100 full-time workers) over a given period of time (usually one year). To evaluate your firm's injury and illness experience over time or to compare your firm's experience with that of your industry as a whole, you need to compute your incidence rate. Because a specific number of workers and a specific period of time are involved, these rates can help you identify problems in your workplace and/or progress you may have made in preventing work-related injuries and illnesses.

How do you calculate an incidence rate?

You can compute an occupational injury and illness incidence rate for all recordable cases or for cases that involved days away from work for your firm quickly and easily. The formula requires that you follow instructions in paragraph (a) below for the total recordable cases or those in paragraph (b) for cases that involved days away from work, *and* for both rates the instructions in paragraph (c).

(a) *To find out the total number of recordable injuries and illnesses that occurred during the year;* count the number of line entries on your OSHA Form 300, or refer to the OSHA Form 300A and sum the entries for columns (G), (H), (I), and (J).

(b) *To find out the number of injuries and illnesses that involved days away from work,* count the number of line entries on your OSHA Form 300 that received a check mark in column (H), or refer to the entry for column (H) on the OSHA Form 300A.

(c) *The number of hours all employees actually worked during the year.* Refer to OSHA Form 300A and optional worksheet to calculate this number.

You can compute the incidence rate for all recordable cases of injuries and illnesses using the following formula:

Total number of injuries and illnesses x 200,000 ÷ Number of hours worked by all employees = Total recordable case rate

(The 200,000 figure in the formula represents the number of hours 100 employees working 40 hours per week, 50 weeks per year would work, and provides the standard base for calculating incidence rates.)

You can compute the incidence rate for recordable cases involving days away from work, days of restricted work activity or job transfer (DART) using the following formula:

(Number of entries in column H + Number of entries in column I) x 200,000 ÷ Number of hours worked by all employees = DART incidence rate

You can use the same formula to calculate incidence rates for other variables such as cases involving restricted work activity (column (I) on Form 300A), cases involving skin disorders (column (M-2) on Form 300A), etc. Just substitute the appropriate total for these cases, from Form 300A, into the formula in place of the total number of injuries and illnesses.

What can I compare my incidence rate to?

The Bureau of Labor Statistics (BLS) conducts a survey of occupational injuries and illnesses each year and publishes incidence rate data by various classifications (e.g., by industry, by employer size, etc.). You can obtain these published data at www.bls.gov/iif or by calling a BLS Regional Office.

Worksheet

Total number of injuries and illnesses			Number of hours worked by all employees		Total recordable case rate
	X 200,000	÷		=	

Number of entries in Column H + Column I			Number of hours worked by all employees		DART incidence rate
	X 200,000	÷		=	

How to Fill Out the Log

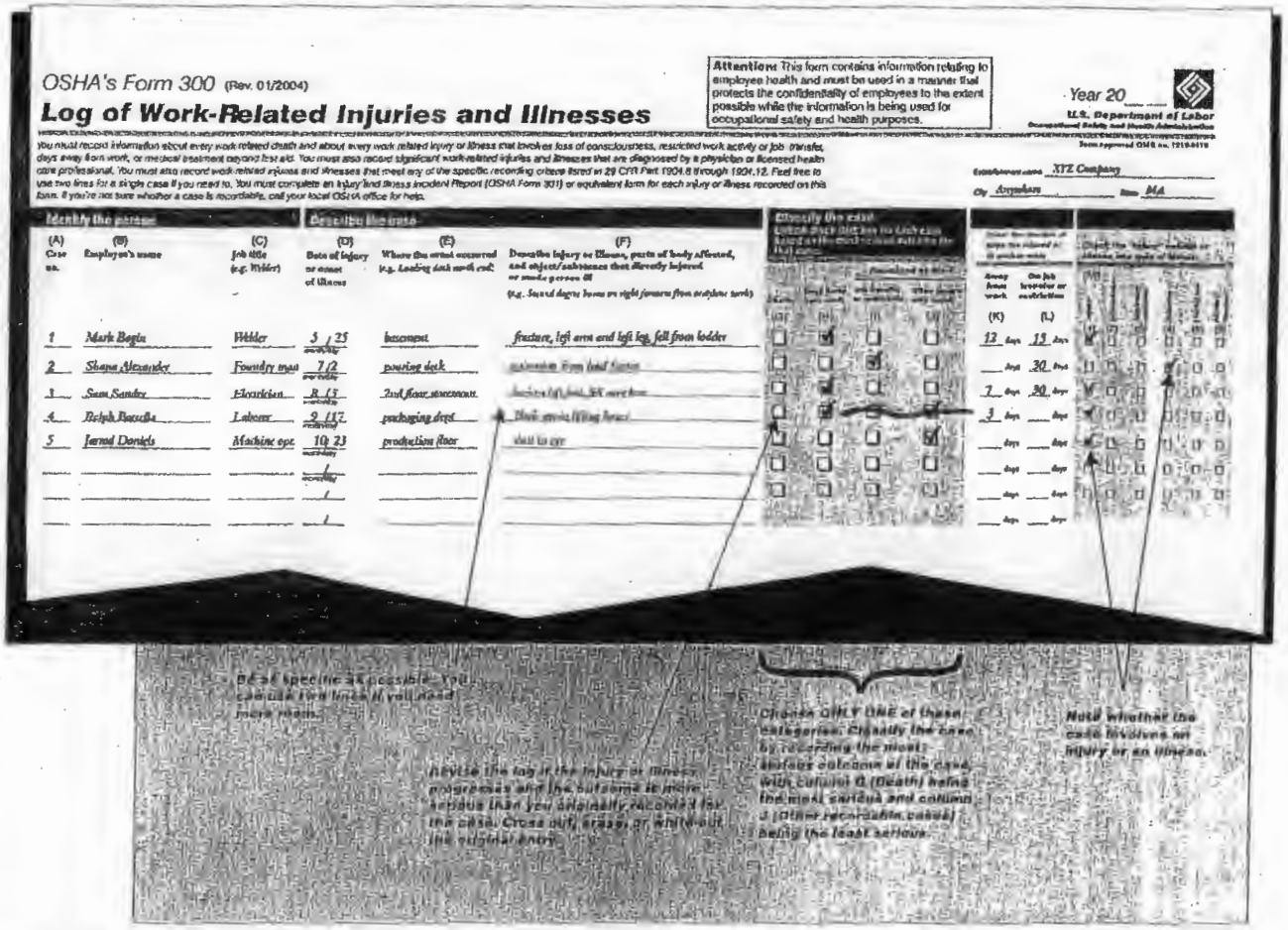
The *Log of Work-Related Injuries and Illnesses* is used to classify work-related injuries and illnesses and to note the extent and severity of each case. When an incident occurs, use the *Log* to record specific details about what happened and how it happened.

If your company has more than one establishment or site, you must keep separate records for each physical location that is expected to remain in operation for one year or longer.

We have given you several copies of the *Log* in this package. If you need more than we provided, you may photocopy and use as many as you need.

The *Summary* — a separate form — shows the work-related injury and illness totals for the year in each category. At the end of the year, count the number of incidents in each category and transfer the totals from the *Log* to the *Summary*. Then post the *Summary* in a visible location so that your employees are aware of injuries and illnesses occurring in their workplace.

You don't post the Log. You post only the Summary at the end of the year.



OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20__ __

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name ________________

City ____________ State ________

Identify the person			Describe the case			Classify the case — CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness:					
(A) Case no.	(B) Employee's name	(C) Job title (e.g., Welder)	(D) Date of injury or onset of illness	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)	Death (G)	Days away from work (H)	Remained at Work: Job transfer or restriction (I)	Remained at Work: Other record-able cases (J)	Away from work (K)	On job transfer or restriction (L)	(M) Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	days	days	☐	☐	☐	☐	☐	☐
					Page totals ➤							Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20__ __

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
_____	_____	_____	_____
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
_____	_____
(K)	(L)

Injury and Illness Types

Total number of . . .	(M)		
(1) Injuries	_____	(4) Poisonings	_____
		(5) Hearing loss	_____
(2) Skin disorders	_____	(6) All other illnesses	_____
(3) Respiratory conditions	_____		

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Establishment Information

Your establishment name _____

Street _____

City _____ State _____ ZIP _____

Industry description (*e.g., Manufacture of motor truck trailers*)

_____

Standard Industrial Classification (SIC), if known (*e.g., 3715*)

____ ____ ____ ____

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

____ ____ ____ ____ ____ ____

Employment Information

(If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees _____

Total hours worked by all employees last year _____

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

_____ _____
Company executive Title

( ) - / /
Phone Date

U.S. Department of Labor
Occupational Safety and Health Administration

Optional

Worksheet to Help You Fill Out the Summary

At the end of the year, OSHA requires you to enter the average number of employees and the total hours worked by your employees on the summary. If you don't have these figures, you can use the information on this page to estimate the numbers you will need to enter on the Summary page at the end of the year.

How to figure the average number of employees who worked for your establishment during the year:

❶ ***Add*** the total number of employees your establishment paid in all pay periods during the year. Include all employees: full-time, part-time, temporary, seasonal, salaried, and hourly.

The number of employees paid in all pay periods = ❶ _____

❷ ***Count*** the number of pay periods your establishment had during the year. Be sure to include any pay periods when you had no employees.

The number of pay periods during the year = ❷ _____

❸ ***Divide*** the number of employees by the number of pay periods.

❶ _____ / ❷ _____ = ❸ _____

❹ ***Round the answer*** to the next highest whole number. Write the rounded number in the blank marked *Annual average number of employees.*

The number rounded = ❹ _____

For example, Acme Construction figured its average employment this way:

For pay period...	Acme paid this number of employees...
1	10
2	0
3	15
4	30
5	40
▼	▼
24	20
25	15
26	+10
	830

Number of employees paid = 830 ❶

Number of pay periods = 26 ❷

830 / 26 = 31.92 ❸

31.92 rounds to 32 ❹

32 is the annual average number of employees

How to figure the total hours worked by all employees:

Include hours worked by salaried, hourly, part-time and seasonal workers, as well as hours worked by other workers subject to day to day supervision by your establishment (e.g., temporary help services workers).

Do not include vacation, sick leave, holidays, or any other non-work time, even if employees were paid for it. If your establishment keeps records of only the hours paid or if you have employees who are not paid by the hour, please estimate the hours that the employees actually worked.

If this number isn't available, you can use this optional worksheet to estimate it.

Optional Worksheet

_____ ***Find*** the number of full-time employees in your establishment for the year.

X _____ ***Multiply*** by the number of work hours for a full-time employee in a year.

_____ This is the number of full-time hours worked.

\+ _____ ***Add*** the number of any overtime hours as well as the hours worked by other employees (part-time, temporary, seasonal)

_____ ***Round*** the answer to the next highest whole number. Write the rounded number in the blank marked *Total hours worked by all employees last year.*

OSHA's Form 301
Injury and Illness Incident Report

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

This *Injury and Illness Incident Report* is one of the first forms you must fill out when a recordable work-related injury or illness has occurred. Together with the *Log of Work-Related Injuries and Illnesses* and the accompanying *Summary*, these forms help the employer and OSHA develop a picture of the extent and severity of work-related incidents.

Within 7 calendar days after you receive information that a recordable work-related injury or illness has occurred, you must fill out this form or an equivalent. Some state workers' compensation, insurance, or other reports may be acceptable substitutes. To be considered an equivalent form, any substitute must contain all the information asked for on this form.

According to Public Law 91-596 and 29 CFR 1904, OSHA's recordkeeping rule, you must keep this form on file for 5 years following the year to which it pertains.

If you need additional copies of this form, you may photocopy and use as many as you need.

Completed by _____

Title _____

Phone (_____)_____-_____ Date ___/___/___

Information about the employee

1) Full name _____

2) Street _____

City _____ State _____ ZIP _____

3) Date of birth ___/___/___

4) Date hired ___/___/___

5) ☐ Male
☐ Female

Information about the physician or other health care professional

6) Name of physician or other health care professional _____

_____

7) If treatment was given away from the worksite, where was it given?

Facility _____

Street _____

City _____ State _____ ZIP _____

8) Was employee treated in an emergency room?
☐ Yes
☐ No

9) Was employee hospitalized overnight as an in-patient?
☐ Yes
☐ No

Information about the case

10) Case number from the *Log* _____ *(Transfer the case number from the Log after you record the case.)*

11) Date of injury or illness ___/___/___

12) Time employee began work _____ AM / PM

13) Time of event _____ AM / PM ☐ Check if time cannot be determined

14) ***What was the employee doing just before the incident occurred?*** Describe the activity, as well as the tools, equipment, or material the employee was using. Be specific. *Examples:* "climbing a ladder while carrying roofing materials"; "spraying chlorine from hand sprayer"; "daily computer key-entry."

15) ***What happened?*** Tell us how the injury occurred. *Examples:* "When ladder slipped on wet floor, worker fell 20 feet"; "Worker was sprayed with chlorine when gasket broke during replacement"; "Worker developed soreness in wrist over time."

16) ***What was the injury or illness?*** Tell us the part of the body that was affected and how it was affected; be more specific than "hurt," "pain," or "sore." *Examples:* "strained back"; "chemical burn, hand"; "carpal tunnel syndrome."

17) ***What object or substance directly harmed the employee?*** *Examples:* "concrete floor"; "chlorine"; "radial arm saw." *If this question does not apply to the incident, leave it blank.*

18) ***If the employee died, when did death occur?*** Date of death ___/___/___

If You Need Help...

If you need help deciding whether a case is recordable, or if you have questions about the information in this package, feel free to contact us. We'll gladly answer any questions you have.

- **Visit us online at www.osha.gov**
- **Call your OSHA Regional office and ask for the recordkeeping coordinator**

  or

- **Call your State Plan office**

U.S. Department of Labor
Occupational Safety and Health Administration

Federal Jurisdiction

Region 1 - 617 / 565-9860
Connecticut; Massachusetts; Maine; New Hampshire; Rhode Island

Region 2 - 212 / 337-2378
New York; New Jersey

Region 3 - 215 / 861-4900
DC; Delaware; Pennsylvania; West Virginia

Region 4 - 404 / 562-2300
Alabama; Florida; Georgia; Mississippi

Region 5 - 312 / 353-2220
Illinois; Ohio; Wisconsin

Region 6 - 214 / 767-4731
Arkansas; Louisiana; Oklahoma; Texas

Region 7 - 816 / 426-5861
Kansas; Missouri; Nebraska

Region 8 - 303 / 844-1600
Colorado; Montana; North Dakota; South Dakota

Region 9 - 415 / 975-4310

Region 10 - 206 / 553-5930
Idaho

State Plan States

Alaska - 907 / 269-4957

Arizona - 602 / 542-5795

California - 415 / 703-5100

*Connecticut - 860 / 566-4380

Hawaii - 808 / 586-9100

Indiana - 317 / 232-2688

Iowa - 515 / 281-3661

Kentucky - 502 / 564-3070

Maryland - 410 / 767-2371

Michigan - 517 / 322-1848

Minnesota - 651 / 284-5050

Nevada - 702 / 486-9020

*New Jersey - 609 / 984-1389

New Mexico - 505 / 827-4230

*New York - 518 / 457-2574

North Carolina - 919 / 807-2875

Oregon - 503 / 378-3272

Puerto Rico - 787 / 754-2172

South Carolina - 803 / 734-9669

Tennessee - 615 / 741-2793

Utah - 801 / 530-6901

Vermont - 802 / 828-2765

Virginia - 804 / 786-6613

Virgin Islands - 340 / 772-1315

Washington - 360 / 902-5554

Wyoming - 307 / 777-7786

*Public Sector only

U.S. Department of Labor
Occupational Safety and Health Administration

Have questions?

If you need help in filling out the *Log* or *Summary*, or if you have questions about whether a case is recordable, contact us. We'll be happy to help you. You can:

- Visit us online at: **www.osha.gov**
- Call your regional or state plan office. You'll find the phone number listed inside this cover.

Appendix D

HASP Acknowledgement Form

HEALTH AND SAFETY PLAN (HASP) ACKNOWLEDGMENT
Operable Unit - 2, Kings Plaza Shopping Center
Brooklyn, New York

I am a representative of ______________________________ authorized to accept responsibility for compliance with all provisions of the HASP.
(Company)

______________________________ (Name) Please Print

______________________________ (Title)

____________________ (Date)

The following project personnel have read, understand, and agree with the information set forth in the referenced HASP and will adhere to all protocols and requirements specified therein for all onsite activities at the Former North Bergen Pool Property conducted by employees, representatives, subcontractors, or vendors of

______________________________.
(Company)

COMPANY	NAME (print)	SIGNATURE	DATE	DATE OF OSHA 40-HR TRAINING (1)	DATE OF OSHA 8-HR REFRESHER (1)

HEALTH AND SAFETY PLAN ACKNOWLEDGMENT (Continued)
Operable Unit - 2, Kings Plaza Shopping Center
Brooklyn, New York

COMPANY	NAME (print)	SIGNATURE	DATE	DATE OF OSHA 40-HR TRAINING (1)	DATE OF OSHA 8-HR REFRESHER (1)

NOTES:
(1) During all subsurface activities in environmentally restricted areas, only authorized personnel will be permitted in the work area. These authorized individuals must have successfully completed an OSHA training course per the OSHA Hazard Communication Standard 29 CFR 1910.120 and 29 CFR 1926 Subpart "P" and must have completed an 8-hour OSHA Refresher within the last year.

APPENDIX D

COMMUNITY AIR MONITORING PLAN

COMMUNITY AIR MONITORING PLAN

During any activities that compromise the integrity of the ECs, the following Community Air Monitoring Plan (CAMP) will be implemented to provide for real-time monitoring at the perimeter of the Site. Based on the site-specific contaminants, real-time monitoring will be conducted for organic vapors and particulates (i.e. fugitive dust). Real-time air monitoring for organic vapors and particulates will be conducted at the downwind perimeter of the Site (equivalent to the Exclusion Zone boundaries) during implementation of any construction activities that compromise the integrity of the ECs.

The objectives of the CAMP are:

- To provide a measure of protection for the downwind community (i.e. potential offsite receptors, including residences and businesses and on-site workers not directly involved with the remediation work activities) from potential airborne contaminant releases as a direct result of maintenance and/or future improvement activities; and

- To confirm that work activities did not spread contamination off-site through the air.

The following subsections outline the proposed scope of the air monitoring for both organic vapors and particulates.

Organic Vapors: Organic vapors will be monitored at the downwind perimeter of the Site during all ground intrusive activities, including soil excavation, utility work, drilling, and backfill placement. Air monitoring will be conducted with a PID that will be calibrated daily prior to the start of work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. All air measurements will be recorded on the attached Community Air Monitoring Log.

The following outlines the action level guidelines for the organic vapor air monitoring data:

- In the unlikely event that the 15-minute running average total organic vapor concentration at the downwind perimeter of the Site (equivalent to the Exclusion Zone boundaries), or individual Work Area, exceeds five parts per million (ppm) above ambient background concentrations, work activities will be temporarily halted and air monitoring will continue. If the total VOC level readily decreases (per instantaneous readings) below five ppm over ambient background, work activities will resume with continued monitoring;

- If total organic vapor levels at the downward perimeter of the Site, or individual Work Area, persist at levels above five ppm over ambient background but less than 25 ppm, work activities will be halted, the source of the vapors identified, corrective actions taken to abate the emissions, and monitoring continued;

- Work activities will then resume if the 15-minute running average total organic vapor concentration is below five ppm in comparison to ambient background concentrations 200 feet downwind of the Site or Work Area, or half the distance to the nearest

potential receptor or residential/commercial structure (whichever is less, but in no case less than 20 feet); and

- If the 15-minute total organic vapor concentration at the downward perimeter of the Site, or individual Work Area, exceeds 25 ppm, work activities will be discontinued.

As previously stated, all PID measurements will be recorded on the Daily Community Monitoring Plan Logs and will be available for review by NYSDEC or New York State Department of Health (NYSDOH) personnel upon request. After completion of the remediation, the Daily Community Air Monitoring Logs will be provided to the NYSDEC.

Particulates: Measures to minimize, or suppress, the generation of fugitive dust emissions will be implemented during ground intrusive activities that may generate fugitive dust, including placement of clean backfill. Particulate concentrations will be monitored on a continuous basis at the upwind and downwind perimeters of the Site using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and integrating over a 15-minute period for comparison to the airborne particulate action levels outlined below. In addition, fugitive dust migration will also be visually assessed for the duration of the remediation to aid in preventing the off-site migration of contaminated particulates.

The following outlines the action level guidelines for the particulate monitoring data:

- In the unlikely event that the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than the ambient background, or upwind perimeter levels, for the 15-minute period or if airborne dust is observed leaving the Site, or the Work Area, then additional dust suppression techniques will be utilized;

- Work will continue with the additional dust suppression techniques provided that the downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind levels and there is no visible dust migrating from the Site and/or individual Work Area;

- After implementation of the additional dust suppression techniques, if the downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind perimeter levels, work will be stopped and work activities will be re-evaluated; and

- Work will resume if the additional dust suppression measures effectively reduce the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind perimeter levels and prevent visible dust migration.

As previously stated, all particulate measurements will be recorded on the Daily Community Monitoring Plan Logs and will be available for review by NYSDEC or NYSDOH personnel upon request and the Daily Community Air Monitoring Logs will be provided to the NYSDEC in Annual Site Management Report. Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

Community Air Monitoring
Data Sheet
Kings Plaza OU-2
(units in ppm)

Date: _____

Time / Station	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	Comments
A-1												
A-2												
A-3												
A-4												
A-5												
A-6												
A-7												
A-8												
A-9												
A-10												
A-11												
A-12												
A-13												
A-14												
A-15												
A-16												
A-17												
A-18												
A-19												
A-20												

Calibration Data: _____ Date_____ Time_____

PPM - parts per million

APPENDIX E

SOIL MANAGEMENT PLAN

SOIL MANAGEMENT PLAN
Former Presto Plastics (OU-2)
Kings Plaza Shopping Center
Brooklyn, New York
NYSDEC VCA NO. A2-0403-9911

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LIST OF FIGURES

SOIL MANAGEMENT PLAN
Former Presto Plastics (OU-2)
Kings Plaza Shopping Center
Brooklyn, New York
NYSDEC VCA No. A2-0403-9911

1.0 INTRODUCTION AND PURPOSE

This document is required for fulfillment of Remedial Action at the Former Presto Plastics Area referred to as Operable Unit (OU)-2 (hereafter referred to as OU-2 or the Site) under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by New York State Department of Environmental Conservation (NYSDEC or Department). The Site was investigated in accordance with the Voluntary Cleanup Agreement (VCA) No. A2-0403-9911 as executed on February 26, 2001.

1.1 Overview and Objectives

Alexander's, Kings Plaza Center, Inc. (Alexander's or Volunteer) entered into a VCA with the NYSDEC to investigate the OU-2 Site located at 5100 Kings Plaza, Brooklyn, Kings County, New York. This VCA required the Volunteer to investigate and remediate soil and groundwater quality associated with documented Historic Fill within the area defined as OU-2. A map of the Site location is shown in Figure 1. A generalized site plan showing the property boundaries and the area defined as OU-2 is shown in Figure 2.

After completion of the work described in the November 2003 Remedial Investigation Report Addendum (RIRA) and May 2005 Remedial Action Workplan (RAW), some contamination was left in the subsurface at this Site, which is hereafter referred to as 'residual contamination.' The residual contamination at the Site is being managed through the establishment of Engineering Controls (ECs) under an Environmental Easement in perpetuity or until extinguishment of the Environmental Easement in accordance with 6 NYCRR Part 375.

The ECs are in-place for the intended future restricted commercial use of this Site therefore this Soil Management Plan has been prepared to outline the management of soil during any future intrusive work that would disturb the residual contamination.

1.2 Site Location and Description

The portion of the Former Presto Plastics Area that is identified as OU-2 is comprised of approximately 0.29-acres located at the northern end of the 55th Street access road to the Kings Plaza Shopping Center as shown on Figure 2. The Kings Plaza Shopping Center is a ±31-acre parcel identified on local tax maps as Section 1, Block 847, Lots 50 and 55. Figure 1 shows the location of the Site on the Coney Island, N.Y. United States Geological Survey (USGS) 7.5 Minute Series topographic map. The Site is bounded by Avenue U to the north, the Kings Plaza Shopping

Center to the west, a paved parking area that is part of the Kings Plaza property (OU-3) to the east, and the 55th Street access road and OU-1 to the south. As shown on Figure 1, the closest surface water body is the Mill Basin located immediately adjacent to the southern side of the Kings Plaza Shopping Center.

1.3 Site History

The area identified as OU-2 is currently owned by Alexander's, a majority-owned subsidiary to Vornado. This area is currently identified as the northern end of the 55th Street access road to the Kings Plaza Shopping Center, which has only been used as an access road since Alexanders' acquisition and development of the property in the early 1970s. Review of existing environmental reports indicates that Presto Plastic Products Company, Inc. and its successors operated at the Site from the early 1940s to the mid-1960s.

According to a Phase I Environmental Site Assessment (ESA) prepared by Certified Engineering and Testing Company, Inc., approximately 20 railroad tankers were uncovered and removed from the Kings Plaza property in 1969. These tankers were reportedly used as petroleum and/or chemical storage tanks by the Presto Plastic Products Company, Inc. and were in approximately the same location as the Macy's building located to the west of the 55th Street access road. Review of Sanborn™ Fire Insurance Maps of the Site and a 1951 aerial photograph of the Site does not indicate that any operations were specifically located at the northern end of 55th Street in the immediate vicinity of the area defined as OU-2 during the time period shown on the maps and the aerial photographs reviewed.

2.0 PREVIOUS INVESTIGATIONS

2.1 Nature and Extent of Contamination

The following reports document the findings of several environmental site assessments and investigations conducted at the subject property, inclusive of OU-2:

- Phase I ESA of Kings Plaza Shopping Mall, Flatbush Avenue and Avenue U, Brooklyn, New York, prepared by Certified Engineering and Testing Company, Inc. on behalf of Alexander's, dated October 4, 1993;
- Contaminant Assessment (CA)/Site Investigation (SI), prepared by IVI on behalf of Rosenman & Colin, LLP, dated July 1997;
- Groundwater Monitoring Report Nos. 1 through 17, prepared by IVI on behalf of Vornado;
- Remedial Investigation Report (RIR)/Remedial Action Workplan (RAW) for the Former Presto Plastics Facility, Operable Unit No. 2, prepared by IVI, dated April 19, 2000;
- Remedial Investigation Report/Remedial Action Workplan (RI/RAW) for the Former Presto Plastics Facility, Operable Unit No. 2, prepared by IVI, dated August 15, 2001; and
- Progress Report Nos. 18 through 25, prepared by Excel Environmental Resources, Inc. (Excel) on behalf of Vornado.
- Remedial Investigation Report Addendum, prepared by Excel on behalf of Vornado, dated November 2003.
- Remedial Action Workplan, prepared by Excel on behalf of Vornado, dated May 2005.

A summary of the information contained in the above-referenced documents has been provided in several historic reports, including Chapter 2.0 of the RIR/RAW for the Former Presto Plastics Facility, dated August 15, 2001, prepared by IVI on behalf of Vornado for submission to the NYSDEC and in the November 2003 RIRA prepared by Excel.

The July 1997 CA/SI Report, prepared by IVI, summarizes the results of an initial investigation of areas within the 55th Street access road, the areas surrounding the Shopping Mall, and the adjacent paved parking lot (OU-3). As outlined in the July 1997 CA/SI Report, the investigation conducted by IVI included the evaluation of groundwater quality through the installation of 13 monitoring wells (designated as MW-1 through MW-13) in the 55th Street access road and around the perimeter of the Shopping Mall.

The August 2001 RIR/RAW summarizes the results of an additional investigation of OU-2 soil and groundwater quality conducted by IVI from June 1999 through September 1999. Review of the August 2001 RIR/RAW indicates that five soil borings (designated B-1 through B-3, B-12, and B-19) were advanced in the immediate vicinity of OU-2. Analytical results of soil samples collected at depths between six to eight feet bgs indicated that there were no Volatile Organic Compounds (VOCs) detected at concentrations above the NYSDEC soil cleanup criteria in any of these five soil borings. The Semi-Volatile Organic Compound (SVOC) results indicated that several BN compounds were reported in soil boring B-19 at concentrations above the NYSDEC soil cleanup criteria. There were no elevated BN concentrations reported in samples collected from the other four soil borings.

As outlined in the November 2003 RIRA, review of the boring logs prepared by IVI for monitoring wells and soil borings advanced in the 55th Street access road during the RI indicate that fill material consisting of brown to gray, medium to coarse sand with wood, bricks, cinders, glass, cobbles, and shells is laterally extensive within 55th Street from the OU-2 area at the northern end of the street to the south near the Mill Basin.

As part of the RI, IVI also collected groundwater samples from monitoring wells MW-4, MW-33, and MW-34 within the OU-2 area. Analytical results indicated that Naphthalene and several BN compounds were reported at concentrations above the New York Groundwater Quality Criteria (NYGWQC). As documented in the November 2003 RIRA, the historic groundwater analytical results for the OU-2 monitoring wells, indicate that BNs are predominantly the only parameters historically reported in groundwater at OU-2 wells MW-4 and MW-33.

Based on the elevated BN concentrations in soil and the composition of the fill, the fill meets the NYSDEC definition of contaminated Historic Fill (defined as non-native fill that was contaminated prior to emplacement; usually due to the presence of ash and cinders which can contribute BNs, metals, and other contaminants to the fill). Furthermore, the historic OU-2 groundwater analytical results were likely biased high due to elevated turbidity in the samples and the fact that NYSDEC-recommended low flow sampling techniques were not used.

In order to complete groundwater quality delineation and to confirm the most appropriate remedial action alternative, Excel conducted a focused soil and groundwater RI in OU-2 in late 2002 and 2003 to verify whether elevated BN concentrations historically reported in soil and groundwater in OU-2 are in fact attributed to Historic Fill.

As summarized in the November 2003 RIRA, Excel verified the existence of a layer of non-indigenous fill at the soil/water interface in OU-2 that contains concrete, brick, wood, glass, ash, and cinders and that the elevated BN concentrations and the composition of the fill meets the NYSDEC definition of contaminated Historic Fill.

Based on the focused RI findings, the BN concentrations in soil at levels above the NYSDEC soil cleanup criteria are attributable to the Historic Fill and are not reflective of a historic point source discharge from site operations as previously indicated by IVI. Since the Historic Fill is laterally extensive and treatment and/or removal of the Historic Fill is technically and economically

unfeasible, remedial action in the form of Engineering Controls (EC) with Institutional Controls (IC) to address the contaminated Historic Fill for compliance with the requirements of the Technical Guidance was implemented for OU-2.

As also summarized in the November 2003 RIRA, the groundwater analytical data generated during two rounds of groundwater sampling and analysis using NYSDEC-recommended low flow sampling techniques indicated that only BNs were reported in groundwater at OU-2 at concentrations slightly above the NYGWQC. This data support the conclusion that the trace BN concentrations are associated with the Historic Fill and not a historic point source discharge therefore, no further action for groundwater in OU-2 is required.

3.0 CONTEMPLATED USE

Currently the subject property is developed for commercial uses. The area designated as OU-2 consists of an asphalt-paved access road and concrete sidewalks adjacent to the shopping center.

4.0 SUMMARY OF REMEDY

The remedial action for the Site included establishment of Engineering Controls under an Environmental Easement as outlined in the November 2003 RIRA and May 2005 RAW. The following sections provide a description of the remedial action.

4.1 Removal of Contaminated Materials

The NYSDEC-approved remedial action for OU-2 did not include the removal of any contaminated materials.

4.2 Residual Contamination

Residual contamination associated with historic fill within the Former Presto Plastics Area designated as OU-2. The elevated BN concentrations and the composition of the fill meet the NYSDEC definition of contaminated historic fill. The contaminants reported above NYSDEC soil cleanup criteria in historic fill within the area defined as OU-2 include the following compounds:

- Benzo(a)anthracene (maximum concentration of 33 mg/kg);
- Chrysene (maximum concentration of 34 mg/kg);
- Benzo(b)fluoranthene (maximum concentration of 26 mg/kg);
- Benzo(k)fluoranthene (maximum concentration of 29 mg/kg);
- Benzo(a)pyrene (maximum concentration of 32 mg/kg);
- Indeno(1,2,3-cd)pyrene (maximum concentration of 21 mg/kg); and
- Dibenz (a,h) anthracene (maximum concentration of 6.2 mg/kg).

4.3 Engineering and Institutional Controls

Since residual contamination is present at this Site, Engineering Controls (ECs) and Institutional Controls (ICs) were implemented to protect public health and the environment in the future. The Controlled Property has two primary ECs. The ECs for the entire OU-2 area consists of the following:

- Asphalt pavement of the 55th Street roadway; and
- Concrete sidewalks adjacent to 55th Street.

ICs are required to implement, maintain and monitor these Engineering Controls. The Environmental Easement requires compliance with these Institutional Controls. These ICs consist of the following:

- All ECs must be operated and maintained as specified in the Site Management Plan (SMP);

- All ECs on the Controlled Property (the Site) must be inspected and certified at a frequency and in a manner defined in the SMP; and
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP.

The Controlled Property has a series of ICs in the form of Site restrictions. Adherence to these ICs is required under the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in this SMP;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for the intended use;
- The Controlled Property may continue to be used for commercial use only, provided the long-term Engineering and Institutional Controls included in the SMP remain in use.

These EC/ICs should:

- Prevent ingestion/direct contact with soil and groundwater with contamination that exceeds soil cleanup objectives and drinking water standards;
- Prevent ingestion/direct contact with contaminated soil; and
- Prevent inhalation of or exposure to contaminants volatilizing from contaminated soil.

4.4 Maintenance

A comprehensive Site-wide inspection will be conducted annually. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of the SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If Site records are complete and up to date.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of the SMP. The reporting requirements are outlined in the Site Management Reporting Plan.

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

5.0 FUTURE INTRUSIVE WORK

The following sections outline the necessary procedures to be followed during any future intrusive work within the area designated as OU-2 that disrupts the Engineering Controls.

5.1 Soil Excavation/Disturbance of Engineering Controls

Advance notification to the NYSDEC is required prior to any disturbance, alteration, improvement or other construction activity within the affected area that compromises the integrity of the Engineering Controls. Intrusive construction work must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP). The HASP is the responsibility of the property owner and should be in compliance with DER-10 Technical Guide and 29 CFR 1910 and 1926, and all other applicable Federal, State and local regulations. Any intrusive construction work must be certified as compliant with the SMP and included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan.

5.2 Soil Screening Methods

Visual and photoionization detector (PID) soil screening and assessment will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (Residual Contamination Zone). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the TSCM (COC).

Screening will be performed by qualified environmental professionals. Resumes will be provided in the Annual Site Management Report for all personnel conducting invasive work field screening (i.e. those representing the Remedial Engineer) for unknown contaminant sources during remediation and development work.

5.3 Stockpile Methods

Temporary onsite soil staging locations for soil excavated for remedial or development activities will be identified prior to start of excavation activities. The excavated soil will be temporarily staged in discrete piles on plastic sheeting, separated using hay bales, and will be covered with plastic sheeting to minimize generation of contaminated runoff and/or fugitive dust emissions. Whenever possible, soil will be stockpiled on asphalt pavement. Stockpile covers will be maintained for the duration of the staging period until the time the material in the stockpile is designated for offsite disposal or onsite reuse as subsurface fill.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Soil stockpiles will be continuously encircled with silt fences. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

A dedicated water truck equipped with a water cannon will be available on-Site for dust control. NYSDEC will consider the use of specially designed devices that are self-contained and capable of providing misting for dust control. DEC approval must be obtained. If dust-free operations are not achieved with such devices, this exception will be revoked.

Each stockpile of excavated soil will be labeled with a numerical stockpile designation. Each stockpile will then be documented in a log book along with the date of excavation, the type of material in the stockpile, the Work Area from which the material was excavated, and the anticipated end-use for the material (e.g. onsite reuse as clean backfill or offsite disposal/recycling). This information will be used to track soil volumes generated for disposal and/or onsite re-use as well as to ensure compliance with regulatory limitations for onsite storage of excavated materials.

Stockpiles generated from remedial or development activities will be inspected once per week to ensure compliance with regulatory limitations.

5.4 Materials Excavation and Loadout

Soil designated for offsite disposal will either be loaded directly into roll-off containers and/or dump trailers for offsite recycling and/or disposal or it will be temporarily stockpiled onsite prior to off-loading, dependant upon the rate of excavated soil generation, turnaround time of roll-offs and/or dump trailers, and recycling/disposal facility daily capacity. All soil stockpiles will be managed in accordance with the procedures outlined in Section 5.3 above. All excavated soil will be managed in accordance with applicable Federal, State, and local regulations. A copy of the transportation and disposal documentation for all contaminated soil generated during the remedial action, including waste manifests, bills of lading, and/or certificates of recycling, will be provided to the NYSDEC.

Soil excavated from below the water table that cannot be adequately drained by staging against the open excavation sidewalls, will be temporarily staged on plastic sheeting to facilitate dewatering prior to loading for off-site transportation. The location of any temporary soil staging areas for this use will be determined in the field prior to the start of excavation activities. The temporary staging of excavated material will be conducted in accordance with the procedures outlined in Section 5.3 above.

The Remediation Engineer or a qualified environmental professional under his/her supervision will oversee all invasive work and the excavation and load-out of all excavated material. The owner of the Controlled Property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Soil Management Plan.

The presence of utilities and easements on the Site will be investigated by the Remedial Engineer. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site. Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYS Department of Transportation (DOT) requirements (and all other applicable transportation requirements).A truck wash will be operated on-Site. The Remediation Engineer will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the remedial construction is complete. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking.

The Remedial Engineer will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Mechanical processing of historical fill and contaminated soil on-Site is prohibited.

5.5 Materials Transport Offsite

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

All trucks loaded with Site materials will exit the vicinity of the Site using only approved truck routes. These truck routes include entering and exiting the 55th Street Access Road via Avenue U and Flatbush Avenue.

Proposed in-bound and out-bound truck routes to the Site are shown in Figure 6 of the SMP. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site. Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

Queuing of trucks will be performed on-Site in order to minimize off-Site disturbance. Off-Site queuing will be prohibited.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the Site. Truck wash waters will be collected and disposed of off-Site in an appropriate manner.

5.6 Materials Disposal Offsite

The disposal locations will be identified and reported to NYSDEC in the Annual Site Management Report.

The total quantity of material expected to be disposed off-Site will be reported to NYSDEC prior to performance of work. This will include quantity, breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc.

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval.

Material that does not meet Track 2 SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

The following documentation will be obtained and reported by the Remedial Engineer for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter from the Remedial Engineer or BCP Applicant to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation site in New York State. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material.

Non-hazardous historic fill and contaminated soils taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2

Historic fill and contaminated soils from the Site are prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the Site are considered by the Division of Solid & Hazardous Materials (DSHM) in NYSDEC to be Construction and Demolition (C/D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC Region 2 DSHM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as dictated by DSHM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a remediation Site, that the soil material is contaminated and that it must not be redirected to on- Site or off- Site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

The Annual Site Management Report will include an accounting of the destination of all material removed from the Site during work performed under this plan, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the Annual Site Management Report.

Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the annual Site Management Report.

Hazardous wastes derived from on-Site will be stored, transported, and disposed of in full compliance with applicable local, State, and Federal regulations. Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, State and Federal regulations.

Waste characterization will be performed for off-Site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results and Quality Assurance (QA)/Quality Control (QC) will be reported in the Final Engineering Report (FER). All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

5.7 Materials Reuse On-Site

NYSDEC approval to reuse any excavated soil as subsurface fill onsite will be requested in advance of placement and no excavated soil will be reused onsite without prior NYSDEC approval. Soil excavated from the affected area that will not be reused as subgrade fill within the

affected area shall be transported offsite for proper offsite disposal as outlined in Sections 5.5 and 5.6.

- Acceptable demolition material proposed for reuse on-Site, if any, will be sampled for asbestos.
- Concrete crushing or processing on-Site is prohibited.
- Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site is prohibited for reuse on-Site.
- Contaminated on-Site material, including historic fill and contaminated soil, removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Soil that is excavated and stockpiled from the area designated as OU-2 may be sampled and classified for reuse or disposal. For excavated soil/fill with visual evidence of contamination (i.e., staining or elevated PID measurements), one composite soil sample and a duplicate sample shall be collected for each 100 cubic yards of stockpiled soil/fill. For excavated soil/fill that does not exhibit visual evidence of contamination, one composite sample and a duplicate shall be collected for every 2,000 cubic yards of stockpiled soil with a minimum of one sample collected.

The composite sample will be collected from five locations within each stockpile and PID measurements will be recorded for each of the five locations. One grab sample will be collected from the individual location with the highest PID measurement. If none of the five sample locations exhibit PID measurements, one location will be selected at random. The composite sample will be analyzed by a NYSDOH ELAP-certified laboratory for pH (EPA Method 9045C), TCL SVOCs, pesticides, PCBs, TAL metals, and cyanide. The grab sample will be analyzed for TCL VOCs.

Soil/fill that has been characterized and found to meet the SCGs may be reused as subgrade backfill, if appropriate. If the analyses indicate that one or more parameters are reported above their respective SCGs, the soil may not be used as backfill onsite and additional analyses may be necessary to further classify the soil for disposal purposes. The soil that does not meet the SCGs will be properly characterized and properly disposed off-site at a licensed disposal facility. Stockpiled soil cannot be transported on or off-site until the analytical results are received.

Any soil that is designated for reuse based on the results of soil reuse sampling and analysis will be stockpiled on plastic and covered with plastic separately from contaminated soil. Soil stockpiles will be numbered numerically and recorded on a soil tracking form for the proper management of the soil stockpiles.

5.8 Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by NYCDEP.

Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-Site. Discharge of water generated during remedial construction to surface waters (i.e. a local pond, stream or river) is prohibited without a State Pollutant Discharge Elimination System (SPDES) permit.

5.9 Demarcation

After the completion of soil removal and any other invasive remedial activities and prior to backfilling, as necessary, a land survey will be performed by a New York State licensed surveyor. The survey will define the top elevation of residual contaminated soils. A physical demarcation layer, consisting of orange safety fencing material or equivalent material will be placed on this surface to provide a visual reference. This demarcation layer will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in this Site Management Plan.

The survey will measure the grade covered by the demarcation layer before the placement of cover soils, pavement and sub-soils, structures, or other materials. This survey and the demarcation layer placed on this grade surface will constitute a modification of the physical and written record of the upper surface of the 'Residuals Management Zone' in the Site Management Plan. A map showing the survey results will be included in the Annual Site Management Report and updates to the Site Management Plan.

5.10 Source and Quality of Backfill

All materials proposed for import onto the Site will be approved by the Remedial Engineer and will be in compliance with provisions in this SMP prior to receipt at the Site. Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site which include only material from a certified virgin source or material that has been tested at a frequency approved by the NYSDEC with no contaminant concentrations above the NYSDEC SCO for the Site. Non-compliant soils will not be imported onto the Site without prior approval by NYSDEC. Nothing in the approved SMP or its approval by NYSDEC should be construed as an approval for this purpose.

Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Nothing in this SMP should be construed as an approval for this purpose.

Solid waste will not be imported onto the Site. Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

Note also that use of any imported fill material is subject to advance approval by Vornado prior to delivery of the material to the Site. Recycled concrete is not acceptable as fill material at or below the shallow groundwater.

5.11 Stormwater Pollution Prevention Plan

A Stormwater Pollution Prevention Plan that conforms to the requirements of NYSDEC Division of Water guidelines and NYS regulations is required prior to any disruption of the ECs within OU-2. The Stormwater Pollution Prevention Plan should include the following components as necessary and appropriate:

- Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.
- Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.
- All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.
- Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.
- Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
- Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

5.12 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during on-site development related construction, sampling will be performed on product, sediment and

5.16 Surface Restoration

Following any disturbance, alteration, or improvement that compromises the integrity of the Engineering Control, the Engineering Controls will be restored to the pre-existing conditions documented in the Environmental Easement established for the Remedial Action. Surface restoration will consist of asphalt pavement with a minimum thickness of three inches of asphalt and three inches of clean subbase material and/or concrete as required based on the engineering specifications for the intended use of the area. Any modifications to the design of the Engineering Control would require advance NYSDEC approval.

5.17 Inspections and Notifications

A comprehensive Site-wide inspection will be conducted annually. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If Site records are complete and up to date.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of the SMP. The reporting requirements are outlined in the Site Management Reporting Plan.

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and New York State Department of Health (NYSDOH) will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Controlled Property owner's Remediation Engineer, who is responsible for certifying the Annual Site Management Report.

All necessary means will be employed to prevent on- and off-Site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-Site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

5.14 Other Nuisances

A plan will be developed and utilized by the contractor for all activities that compromise the integrity of the ECs and will conform, at a minimum, to NYCDEP noise control standards

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

5.15 Construction Water Management

During any excavation activities, pumping of water (i.e., groundwater and/or storm water that has accumulated in an excavation), if necessary, will be conducted in such a manner to prevent the migration of soil/fill particulates and to prevent damage to the existing subgrade. Water pumped from any excavations will be managed in accordance with all applicable regulations so as to prevent endangerment of public health or the environment.

Water pumped from excavations will be containerized and analyzed for BNs (COC in OU-2). If the water analytical results meet the NYSDEC surface water and groundwater quality standards, the water may be discharged to the storm sewer system at the Site, however, all discharges from the excavation shall be controlled and shall be properly permitted. If the water does not meet the surface water and groundwater quality standards, the water must be transported offsite for proper disposal or treated onsite via a treatment system that has been approved by the NYSDEC.

surrounding soils, etc. Chemical analytical work will be for full scan parameters (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs). These analyses will not be limited to STARS parameters where tanks are identified without prior approval by NYSDEC. Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will be also included in daily and periodic electronic media reports.

5.13 Fugitive Dust, Soil Erosion Control, and VOC Vapor Mitigation

Fugitive dust, soil erosion, and generation of VOC vapors during excavation activities will be suppressed and/or controlled using a number of standard construction practices. The following measures will be utilized, as necessary and appropriate, during all subgrade excavation and soil and concrete screening, crushing, and handling activities to control the generation of dust, soil erosion, and VOC vapors during the remediation:

- Cover stockpiles of excavated soil with plastic after onsite activity ceases, as necessary and appropriate;
- Control the excavation size or number of excavations as needed to minimize exposed soil faces;
- Wet equipment and excavation faces during active construction;
- Apply water mist on truck and equipment routes and restrict vehicle speeds across areas of exposed soil or soil-covered asphalt to less than 10 miles per hour;
- Spray tap water on buckets during loading of soil prior to transport to staging or reuse areas and/or during loading for offsite disposal; and
- Dust suppression will be achieved though the use of a dedicated on-Site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-Site roads will be limited in total area to minimize the area required for water truck sprinkling.

As outlined in Section 6.2, a site-specific CAMP shall be implemented during any ground intrusive activities, including collection of real-time measurements of organic vapors and particulates and visual observations of dust generation.

6.0 HEALTH AND SAFETY

6.1 Construction Personnel Protection

Any construction activities that disturb the asphalt pavement and/or concrete sidewalk areas within the Engineering Controls and Deed Restriction boundaries must be completed in accordance with applicable rules of the Occupational Safety and Health Administration (OSHA) and must be performed by a contractor with appropriate OSHA 1910.120 HAZWOPER Training certification. In accordance with NYSDEC Technical Guidance and OSHA 1910.120, a site-specific HASP will be required during any construction activities within the Engineering Controls and Deed Restriction boundaries to ensure that exposure to contamination in excess of the applicable remediation standards does not occur.

The HASP should be user-friendly and establish the safe work procedures and level of personnel safety during construction activities, including emergency notification information and a local hospital route. In accordance with OSHA requirements, a site-specific HASP must be prepared and distributed to all workers involved in the construction activities and must be present onsite during any construction activities that disturb the Engineering Controls and Deed Restricted area.

6.2 Community Air Monitoring Program

During any activities that compromise the integrity of the ECs, a CAMP will be implemented to provide for real-time monitoring at the perimeter of the Site. Based on the site-specific contaminants, real-time monitoring will be conducted for organic vapors and particulates (i.e. fugitive dust). Real-time air monitoring for organic vapors and particulates will be conducted at the downwind perimeter of the Site (equivalent to the Exclusion Zone boundaries) during implementation of any construction activities that compromise the integrity of the ECs.

The objectives of the CAMP are:

- To provide a measure of protection for the downwind community (i.e. potential offsite receptors, including residences and businesses and on-site workers not directly involved with the remediation work activities) from potential airborne contaminant releases as a direct result of maintenance and/or future improvement activities; and

- To confirm that work activities did not spread contamination off-site through the air.

The following subsections outline the proposed scope of the air monitoring for both organic vapors and particulates.

Organic Vapors: Organic vapors will be monitored at the downwind perimeter of the Site during all ground intrusive activities, including soil excavation, utility work, drilling, and backfill placement. Air monitoring will be conducted with a PID that will be calibrated daily prior to the

start of work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. All air measurements will be recorded on a Community Air Monitoring Log provided in Appendix F of the Site Management Plan.

The following outlines the action level guidelines for the organic vapor air monitoring data:

- In the unlikely event that the 15-minute running average total organic vapor concentration at the downwind perimeter of the Site (equivalent to the Exclusion Zone boundaries), or individual Work Area, exceeds five parts per million (ppm) above ambient background concentrations, work activities will be temporarily halted and air monitoring will continue. If the total VOC level readily decreases (per instantaneous readings) below five ppm over ambient background, work activities will resume with continued monitoring;

- If total organic vapor levels at the downward perimeter of the Site, or individual Work Area, persist at levels above five ppm over ambient background but less than 25 ppm, work activities will be halted, the source of the vapors identified, corrective actions taken to abate the emissions, and monitoring continued;

- Work activities will then resume if the 15-minute running average total organic vapor concentration is below five ppm in comparison to ambient background concentrations 200 feet downwind of the Site or Work Area, or half the distance to the nearest potential receptor or residential/commercial structure (whichever is less, but in no case less than 20 feet); and

- If the 15-minute total organic vapor concentration at the downward perimeter of the Site, or individual Work Area, exceeds 25 ppm, work activities will be discontinued.

As previously stated, all PID measurements will be recorded on the Daily Community Monitoring Plan Logs and will be available for review by NYSDEC or NYSDOH personnel upon request. After completion of the remediation, the Daily Community Air Monitoring Logs will be provided to the NYSDEC.

Particulates: Measures to minimize, or suppress, the generation of fugitive dust emissions will be implemented during ground intrusive activities that may generate fugitive dust, including placement of clean backfill. Particulate concentrations will be monitored on a continuous basis at the upwind and downwind perimeters of the Site using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and integrating over a 15-minute period for comparison to the airborne particulate action levels outlined below. In addition, fugitive dust migration will also be visually assessed for the duration of the remediation to aid in preventing the off-site migration of contaminated particulates.

The following outlines the action level guidelines for the particulate monitoring data:

- In the unlikely event that the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than the ambient background, or upwind perimeter levels, for the 15-

minute period or if airborne dust is observed leaving the Site, or the Work Area, then additional dust suppression techniques will be utilized;

- Work will continue with the additional dust suppression techniques provided that the downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind levels and there is no visible dust migrating from the Site and/or individual Work Area;

- After implementation of the additional dust suppression techniques, if the downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind perimeter levels, work will be stopped and work activities will be re-evaluated; and

- Work will resume if the additional dust suppression measures effectively reduce the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind perimeter levels and prevent visible dust migration.

As previously stated, all particulate measurements will be recorded on the Daily Community Monitoring Plan Logs and will be available for review by NYSDEC or NYSDOH personnel upon request and the Daily Community Air Monitoring Logs will be provided to the NYSDEC in Annual Site Management Report. Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

7.0 QUALITY ASSURANCE/QUALITY CONTROL

All characterization samples collected during and disruption to the ECs will be analyzed using the most recent NYSDEC Analytical Services Protocols (ASP). Analytical data will be submitted in complete ASP Category B data packs including documentation of laboratory QA/QC procedures that will provide legally defensible data in a court of law. If requested, the Category B data packs will be submitted to the NYSDEC.

The laboratory proposed to perform the analyses will be certified through the New York State Department of Health Environmental Laboratory Approval Program (ELAP) to perform Contract Laboratory Program (CLP) analysis and Solid Waste and Hazardous Waste Analytical testing on all media to be sampled during the work. The laboratory will maintain this certification for the duration of the project.

Procedures for chain of custody, laboratory instrumentation calibration, laboratory analyses, reporting of data, internal quality control, and corrective actions shall be followed as per NYSDEC ASP and as per laboratory's QA Plan. Where appropriate, trip blanks, field blanks, field duplicates, and matrix spike, matrix spike duplicate shall be performed at a rate of 5 percent and will be used to assess the quality of the data.

8.0 OPERATION MONITORING & MAINTENANCE WORK PLAN

ECs at the Site include the existing asphalt-paved roadway and existing concrete sidewalks as engineered "caps" to minimize any future direct contact with residually contaminated soil. A comprehensive Site-wide inspection will be conducted annually. The inspection will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If Site records are complete and up to date.

At a minimum, visual inspections will be conducted on an annual basis to identify any breaches in the asphalt pavement or concrete, areas of differential settlement, cracking, pot-holes, or other conditions that might compromise the effectiveness of the ECs. An inspection checklist will be completed during each inspection and copies will be maintained by the Volunteer. The reporting requirements are outlined in the Site Management Reporting Plan.

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

Any necessary repairs will be made to the asphalt and concrete cap. Maintenance activities and/or repairs will include patching of potholes, filling and patching depressions, and sealing of cracks, if any. All repairs and restorations will be completed within 30 days of the inspection. A record of the ECs inspection and maintenance activities will be maintained by the Volunteer.

Inspection frequency is subject to change by NYSDEC and NYSDOH. Unscheduled inspections and/or sampling may take place when a suspected failure of the ECs has been reported or an emergency occurs that is deemed likely to affect the operation of the system.

9.0 NOTIFICATION AND REPORTING

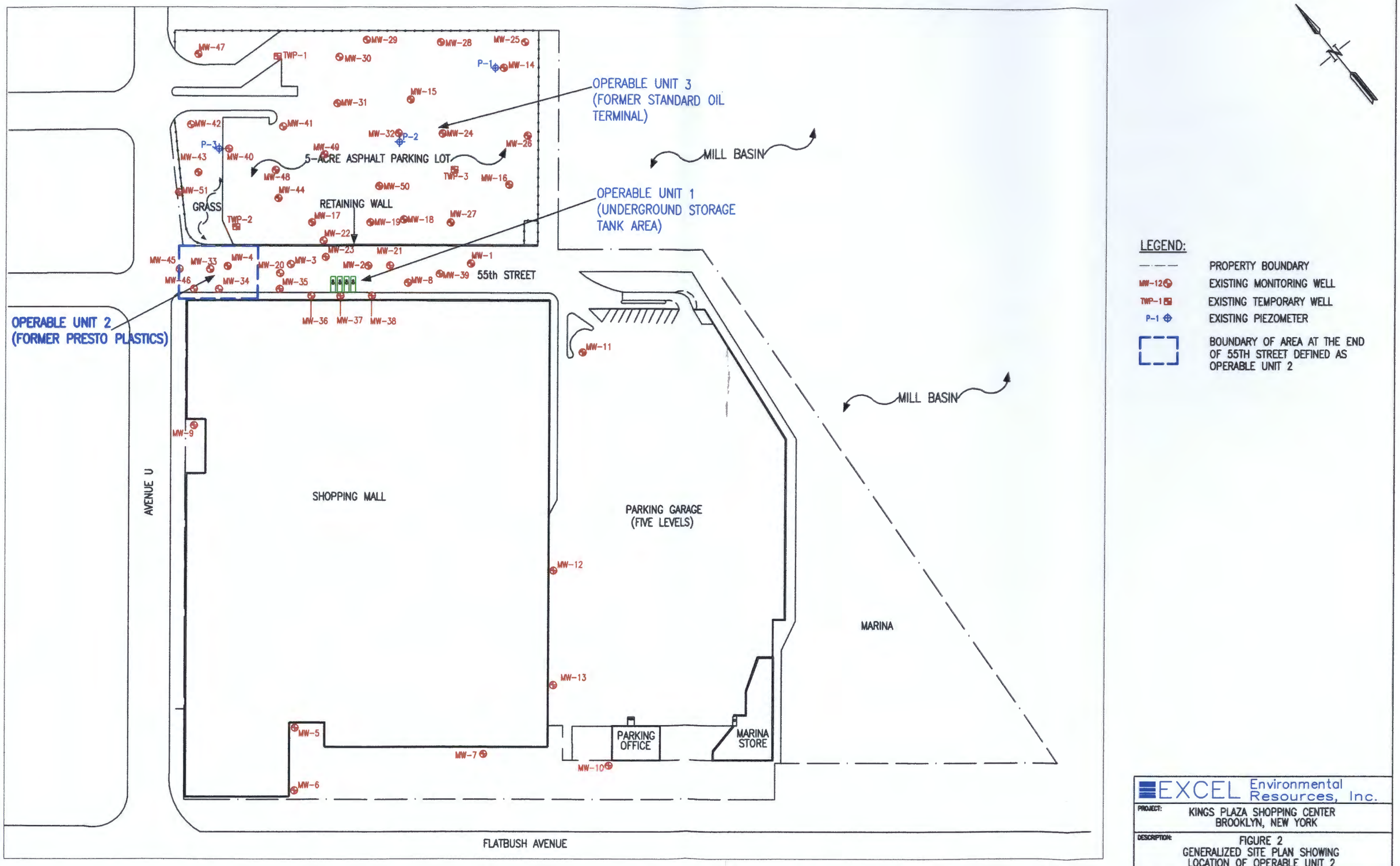
The following minimum notification and reporting requirements shall be followed by the property owner prior to and following any intrusive activities within the area designated as OU-2:

- The NYSDEC will be notified that subgrade activities are being initiated a minimum of three working days in advance of construction.
- If buried drums or underground storage tanks are encountered during soil excavation activities, excavation will cease and the NYSDEC will be immediately notified.
- A construction certificate report stamped by a New York State licensed Professional Engineer, will be prepared and submitted to the NYSDEC and NYSDOH within 90 days after development of each subparcel. At a minimum, the report will include:
  - An area map showing the subparcel where the activities were conducted;
  - Plans showing areas and depth of fill removal;
  - Copies of daily inspection reports for soil-related issues;
  - Description of soil erosion control measures; and
  - A text narrative describing the excavation activities performed, health and safety monitoring performed, quantities and locations of soil/fill excavated, disposal documentation, soil sample locations and results, clean backfill documentation, and other pertinent information necessary to document that the site activities were carried out properly.

SOURCE:
UNITED STATES GEOLOGICAL SURVEY
7.5 MINUTE SERIES (TOPOGRAPHIC)
CONEY ISLAND, NY QUADRANGLE
1995

EXCEL ENVIRONMENTAL RESOURCES, INC.		
KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK		
FIGURE 1 SITE LOCATION MAP		
DRAWN BY: NA	SCALE: 1:24,000	10/17/2003
CHECKED BY: EM	REVISION: 2.0	PROJECT #: 02432

G:\PROJECTS_32-OU 2\FIGURES\SITEPLAN-REVISED.DWG



EXCEL Environmental Resources, Inc.

PROJECT: KINGS PLAZA SHOPPING CENTER BROOKLYN, NEW YORK		
DESCRIPTION: FIGURE 2 GENERALIZED SITE PLAN SHOWING LOCATION OF OPERABLE UNIT 2		
DRAWN BY: MLE	SCALE: 1" = 150'	DATE: 12/3/07
CHECKED BY: RAH	REVISION: 1.0	PROJECT #: 02432

APPENDIX F

COMMUNITY AIR MONITORING DATA SHEET

Community Air Monitoring
Data Sheet
Kings Plaza OU-2

(units in ppm)

Date: _____

Time / Station	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	Comments
A-1												
A-2												
A-3												
A-4												
A-5												
A-6												
A-7												
A-8												
A-9												
A-10												
A-11												
A-12												
A-13												
A-14												
A-15												
A-16												
A-17												
A-18												
A-19												
A-20												

Calibration Data: _____ Date_____ Time_____

PPM - parts per million

K:\Data\Projects\02432 OU-2\SMP\airmonitoringwksheet

APPENDIX G

ELECTRONIC SITE NOTIFICATION

ELECTRONIC NOTIFICATION DATABASE

Site Summary:

The portion of the Former Presto Plastics Area that is identified as OU-2 is located at the northern end of the 55th Street access road to the Kings Plaza Shopping Center as shown on Figure 2. The Kings Plaza Shopping Center is a ±31-acre parcel identified on local tax maps as Section 1, Block 847, Lots 50 and 55. Figure 1 shows the location of the Site on the Coney Island, N.Y. United States Geological Survey (USGS) 7.5 Minute Series topographic map. The Site is bounded by Avenue U to the north, the Kings Plaza Shopping Center to the west, a paved parking area that is part of the Kings Plaza property (OU-3) to the east, and the 55th Street access road and OU-1 to the south. As shown on Figure 1, the closest surface water body is the Mill Basin located immediately adjacent to the southern side of the Kings Plaza Shopping Center.

The area identified as OU-2 is currently owned by Alexander's, a majority-owned subsidiary to Vornado. This area is currently identified as the northern end of the 55th Street access road to the Kings Plaza Shopping Center, which has only been used as an access road since Alexanders' acquisition and development of the property in the early 1970s. Review of existing environmental reports indicates that Presto Plastic Products Company, Inc. and its successors operated at the Site from the early 1940s to the mid-1960s.

Site Owner:

Alexander's, Kings Plaza Center, Inc.

Location of the Site:

The Site is located at 5100 Kings Plaza, Brooklyn, Kings County, New York. The portion of the Former Presto Plastics Area that is identified as OU-2 is located at the northern end of the 55th Street access road to the Kings Plaza Shopping Center. The Kings Plaza Shopping Center is a ±31-acre parcel identified on local tax maps as Section 1, Block 847, Lots 50 and 55.

Status of Remedial Action

The remedial action for the Site includes establishment of Engineering Controls under an Environmental Easement as outlined in the November 2003 RIRA and May 2005 RAW. Residual contamination associated with Historic Fill within the Former Presto Plastics Area designated as OU-2. The elevated BN concentrations and the composition of the fill meet the NYSDEC definition of contaminated Historic Fill.

Since residual contamination is present at this Site, Engineering Controls and Institutional Controls will be implemented to protect public health and the environment in the future.

The Controlled Property has two primary ECs. The ECs for the entire OU-2 area consists of the following:

- Asphalt pavement of the 55th Street roadway; and
- Concrete sidewalks adjacent to 55th Street.

ICs are required to implement, maintain and monitor these Engineering Controls. The Environmental Easement requires compliance with these Institutional Controls. These ICs consist of the following:

- All ECs must be operated and maintained as specified in this SMP;
- All ECs on the Controlled Property (the Site) must be inspected and certified at a frequency and in a manner defined in this SMP; and
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP.

The Controlled Property has a series of ICs in the form of Site restrictions. Adherence to these ICs is required under the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in this SMP;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for the intended use;

The Controlled Property may continue to be used for commercial use only, provided the long-term Engineering and Institutional Controls included in the SMP remain in use.

Environmental Easement

See Attached

Contact:

Ronald Harwood, Vice President
Excel Environmental Resources, Inc.
(732) 545-9525

Emergency Contacts/Notification System

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The list is also posted prominently at the Site and made readily available to all personnel at all times.

Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	

Contact Numbers

Vornado Realty:	(201) 587-1000
Excel Environmental Resources:	(732) 545-9525

* Note: Contact numbers subject to change and should be updated as necessary

Map and Directions to Nearest Health Facility

Site Location: 5100 Kings Plaza, Brooklyn, New York

Nearest Hospital Name: Kings Memorial Hospital

Hospital Location: 2310 Kings Highway, Brooklyn, New York

Hospital Telephone: (718) 252-3000

Directions to the Hospital:

1. Start out going southwest on Avenue U for 0.1 miles
2. Turn right onto Flatbush Avenue and continue for 1.1 miles
3. Turn left on Kings Highway and continue for 1.1 miles to hospital

Total Distance: 2.3 miles

Total Estimated Time: 7 minutes

APPENDIX H

SITE INSPECTION FORM

DEED NOTICE INSPECTION LOG
Kings Plaza Shopping Center: OU-2
Brooklyn, New York

DATE

LOCATION	AREA OF CONCERN	DESCRIPTION	CONDITION OF ENGINEERING CONTROLS	REPAIRS MADE SINCE LAST INSPECTION	NOTES
Kings Plaza Shooping Mall: OU-2	Former Location of Presto Plastics at the Northern End of the 55th Street Access Road	Existing Asphalt Pavement of Roadway and Concrete Sidewalks			

Inspection Conducted By: _____

Company: _____

Signature: _____